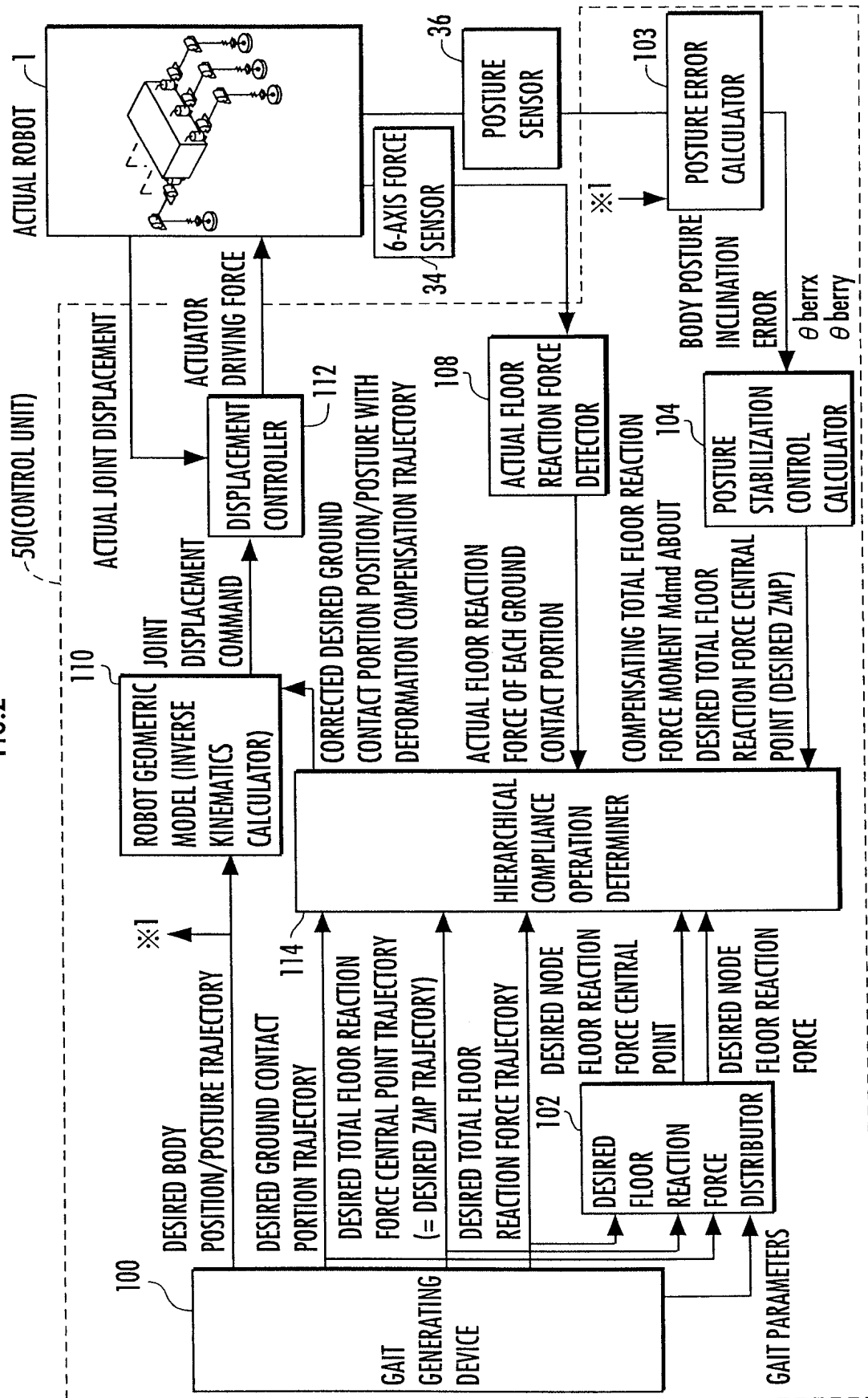


2 / 55

FIG. 2



3 / 55

FIG.3(a)

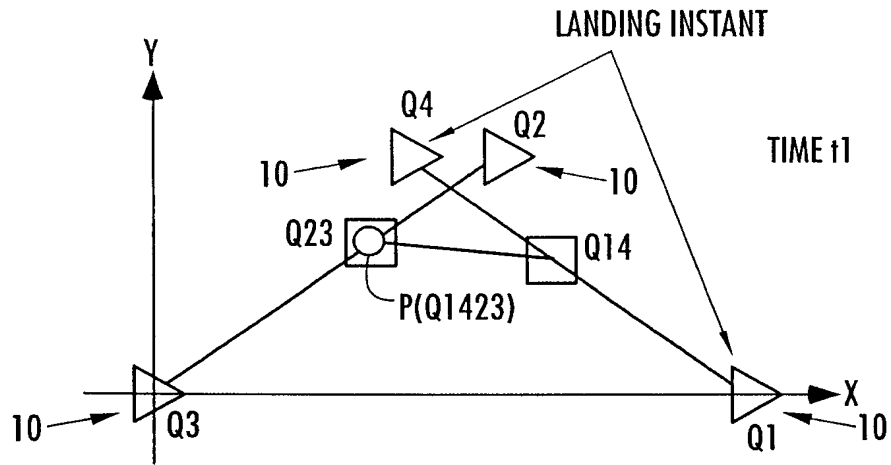


FIG.3(b)

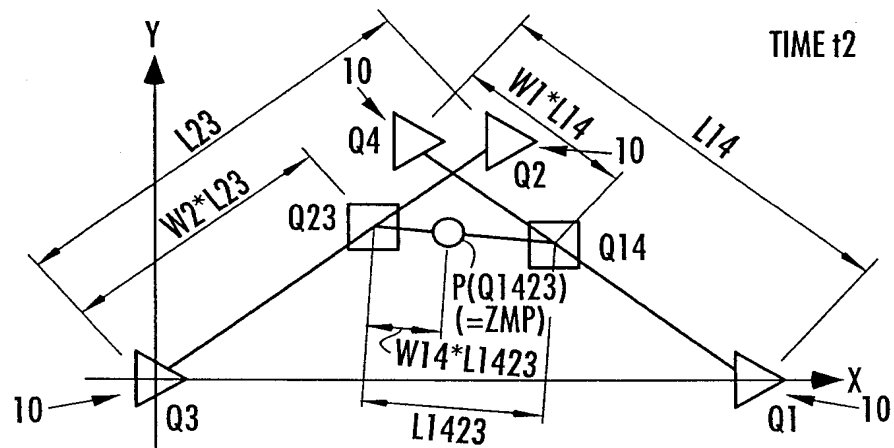
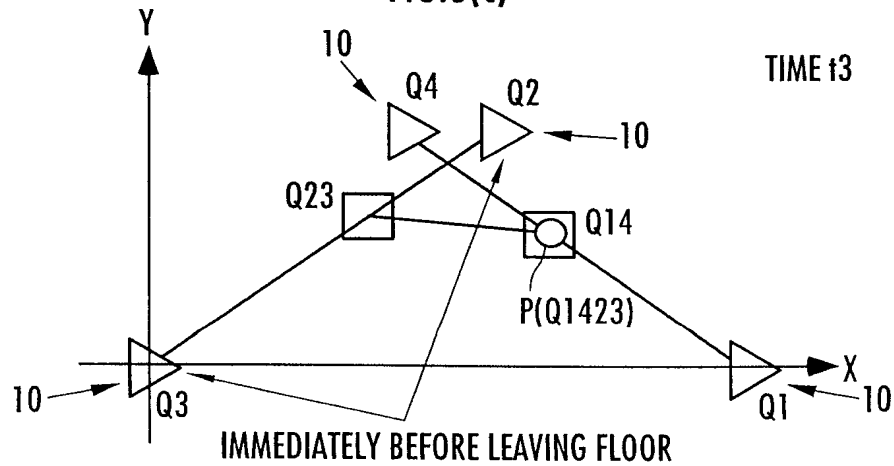


FIG.3(c)



4 / 55

FIG.4(a)

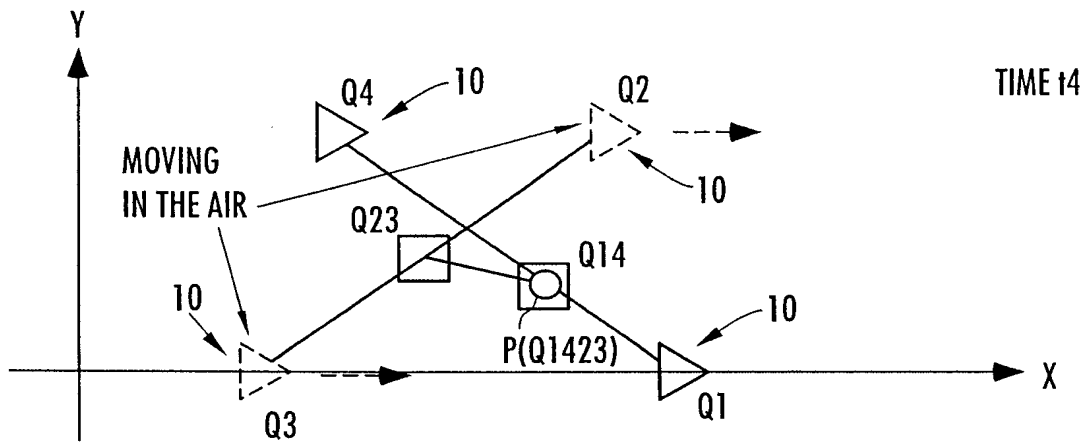


FIG.4(b)

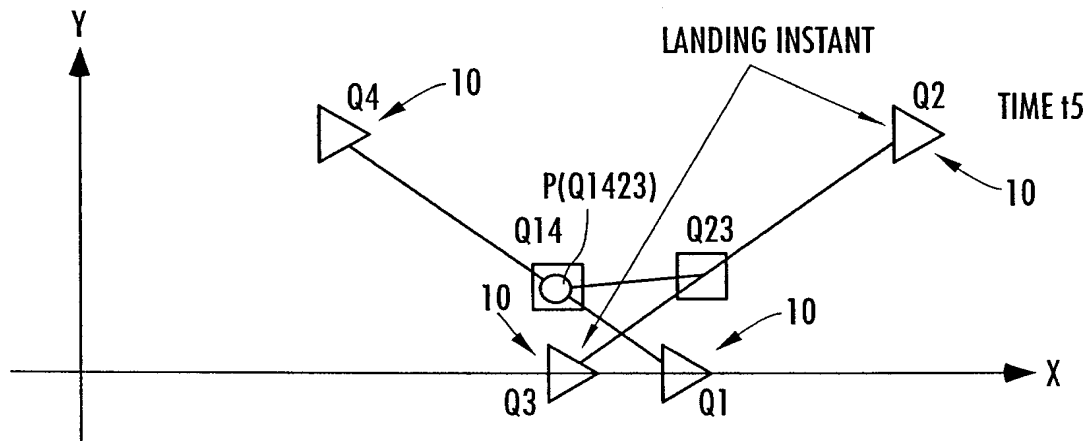
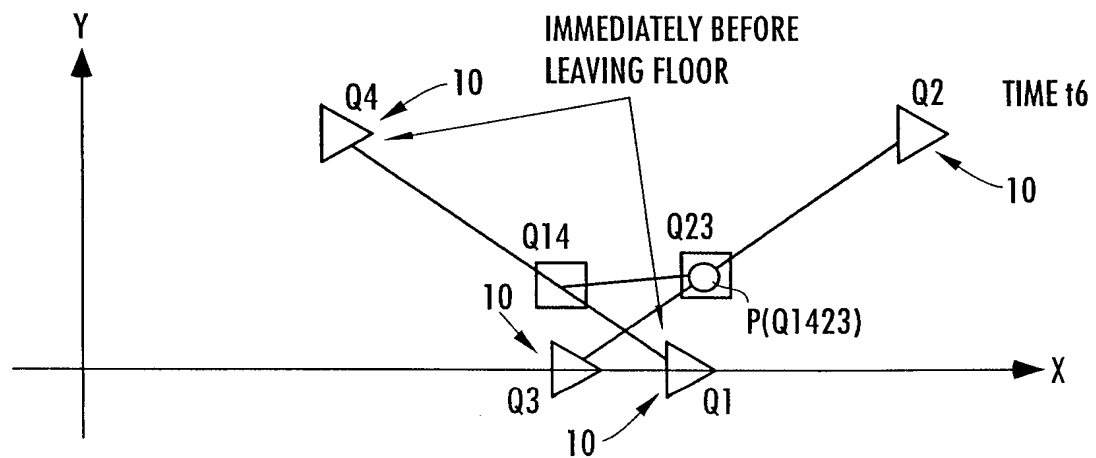


FIG.4(c)



5 / 55

FIG.5(a)

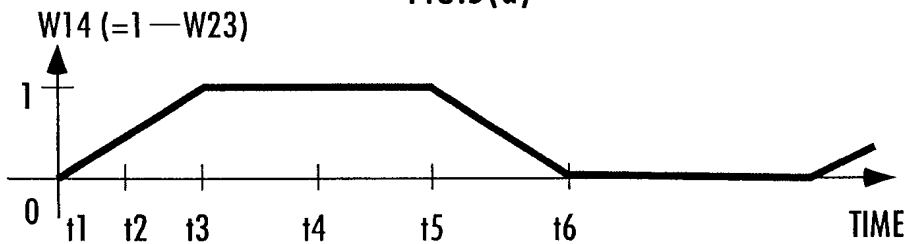


FIG.5(b)

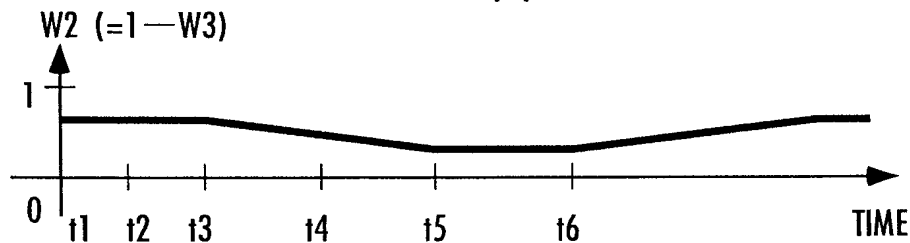


FIG.5(c)

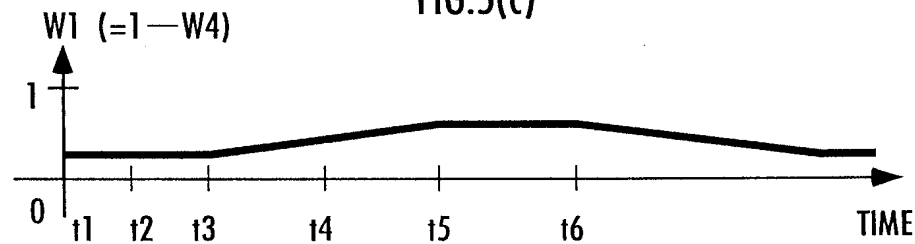
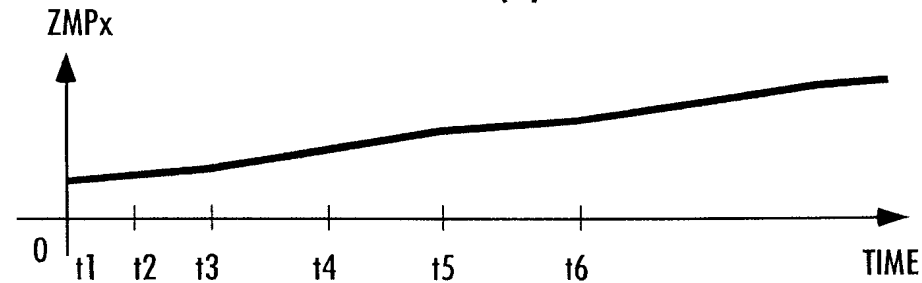


FIG.5(d)



6 / 55

FIG.6
1423RD NODE

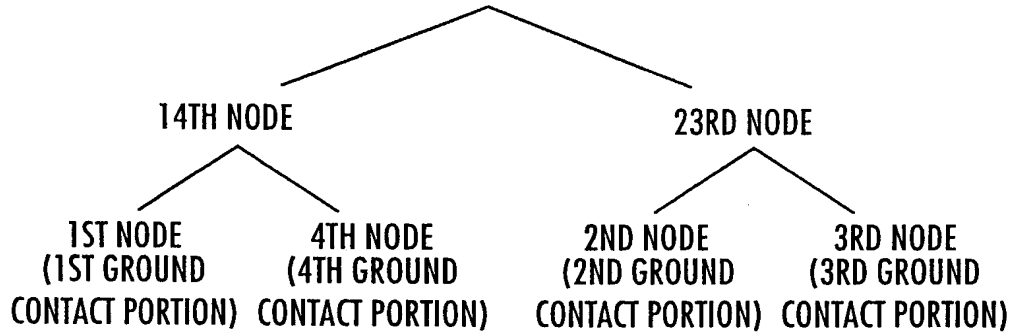
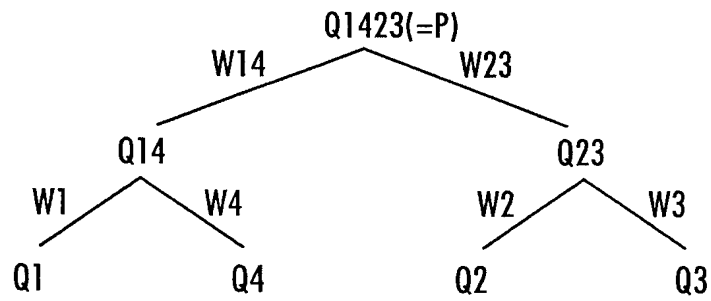


FIG.7



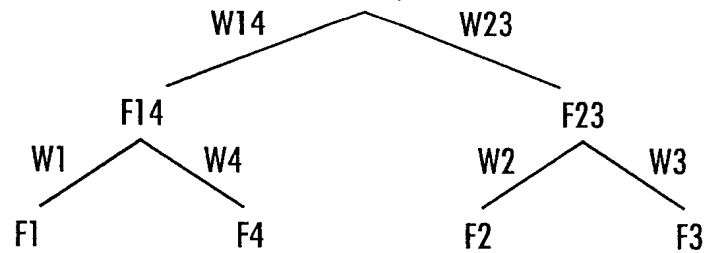
$$Q14 = W1 \cdot Q1 + W4 \cdot Q4$$

$$Q23 = W2 \cdot Q2 + W3 \cdot Q3$$

$$Q1423 = W14 \cdot Q14 + W23 \cdot Q23$$

FIG.8

F1423(=DESIRED TOTAL FLOOR REACTION FORCE $F_{totalref}$)



$$F1 = W1 \cdot W14 \cdot F_{totalref}$$

$$F4 = W4 \cdot W14 \cdot F_{totalref}$$

$$F2 = W2 \cdot W23 \cdot F_{totalref}$$

$$F3 = W3 \cdot W23 \cdot F_{totalref}$$

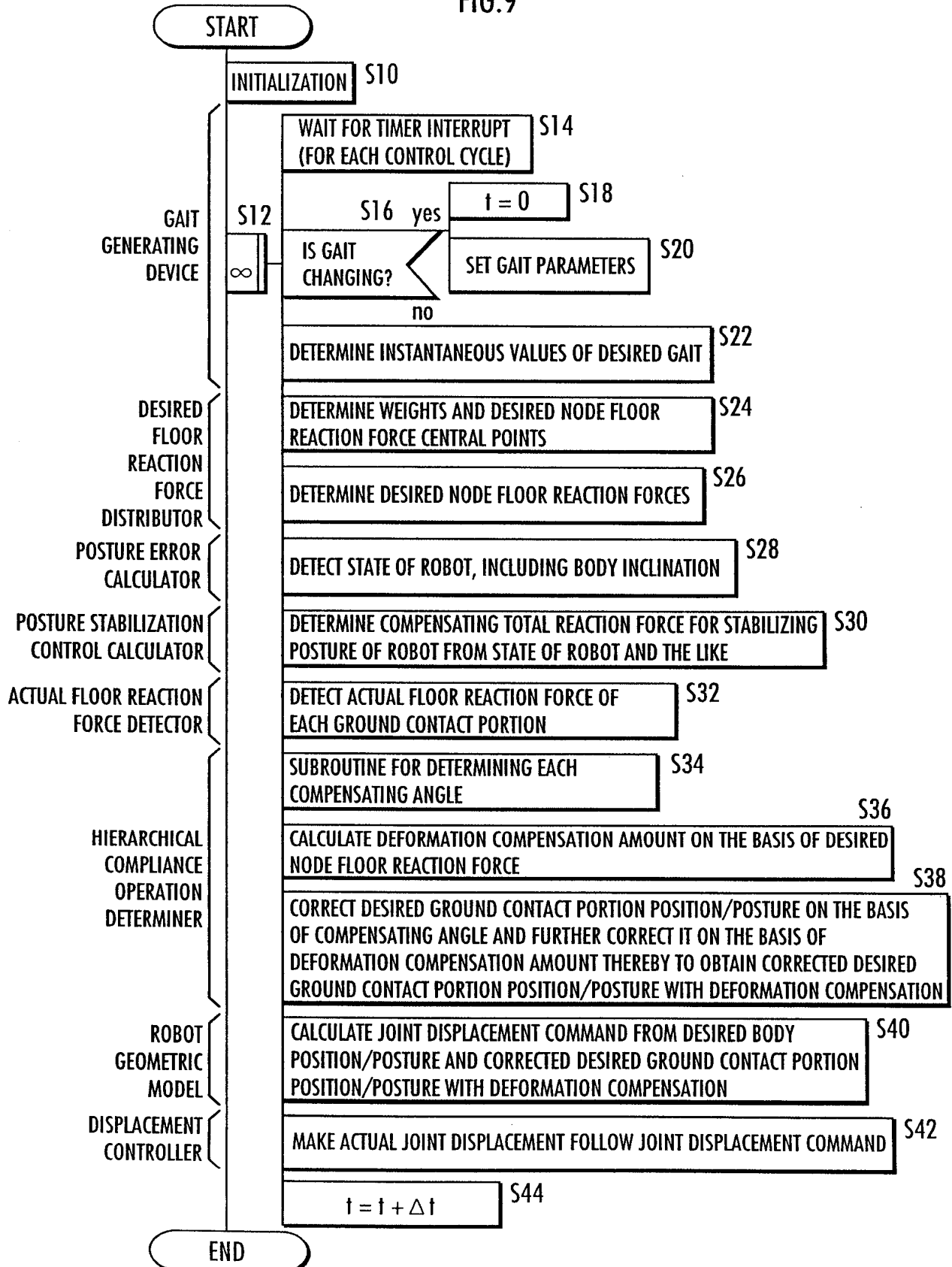
$$F14 = F1 + F4$$

$$F23 = F2 + F3$$

$$F1423 = F14 + F23$$

7 / 55

FIG. 9



8 / 55

FIG.10

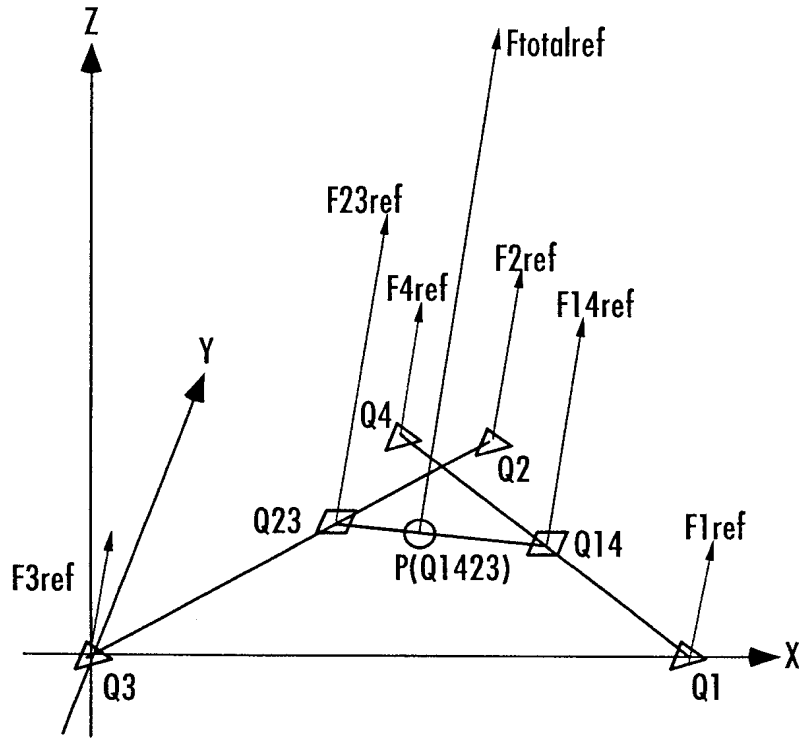
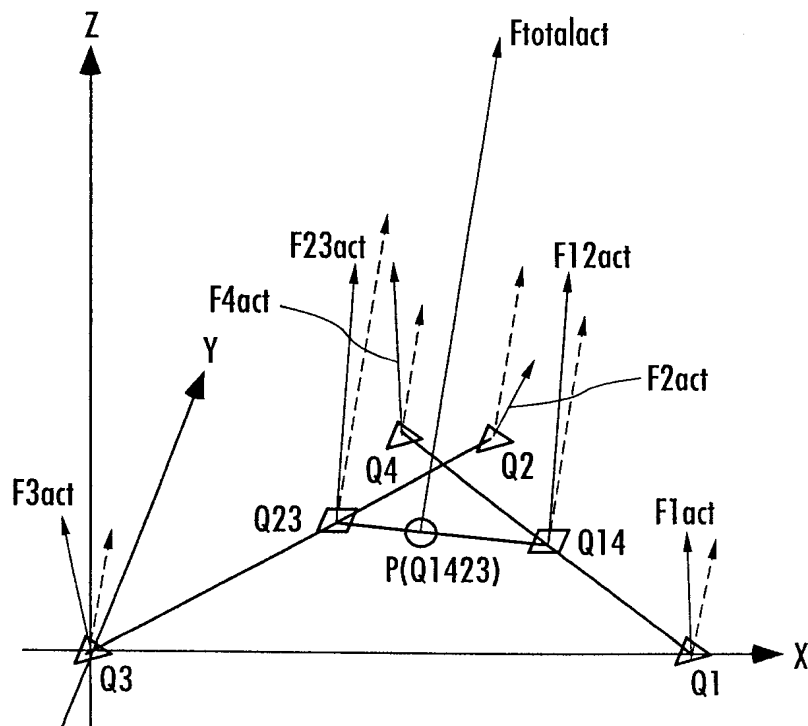


FIG.11



9 / 55

FIG.12

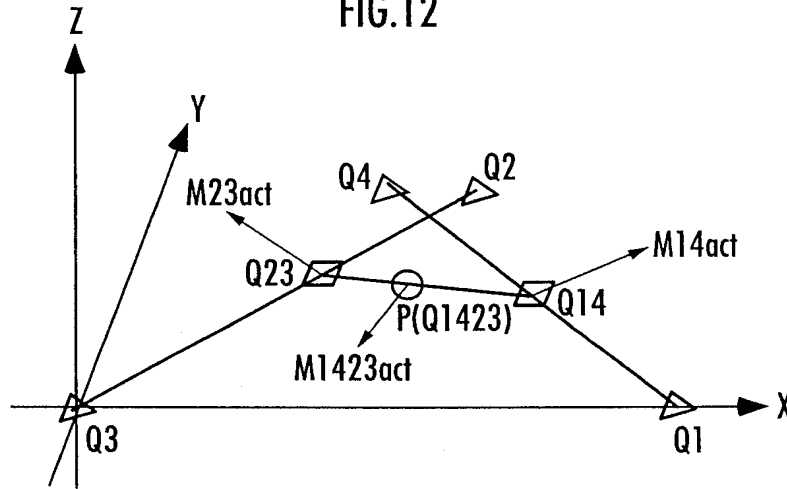


FIG.13

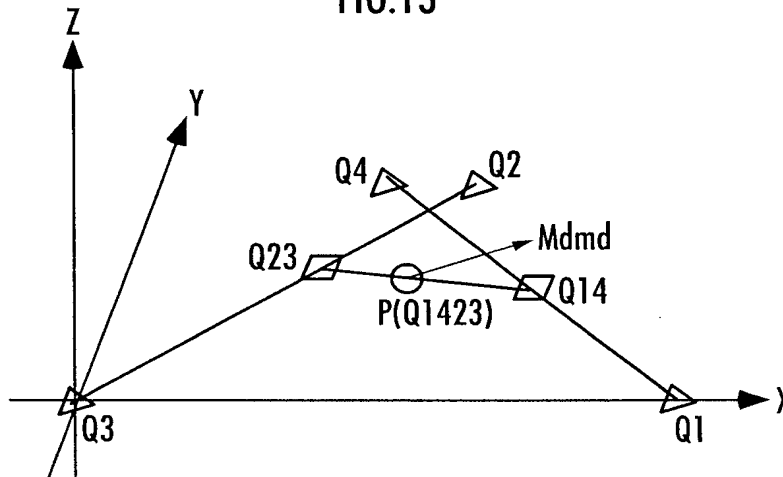
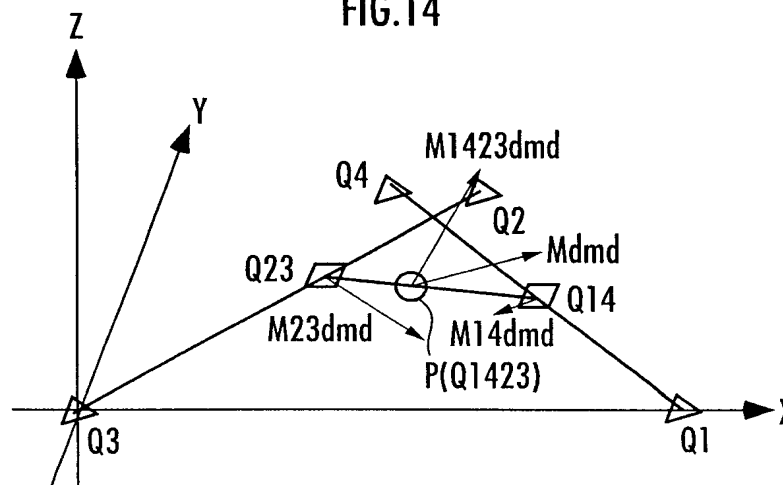


FIG.14



10 / 55

FIG.15

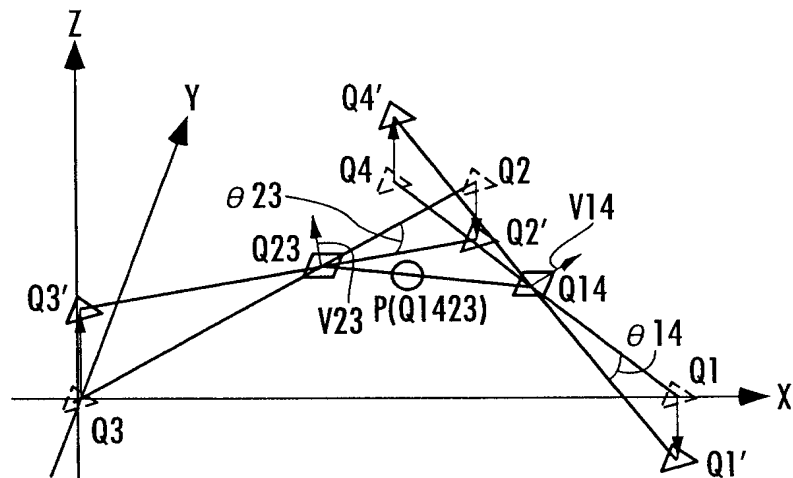
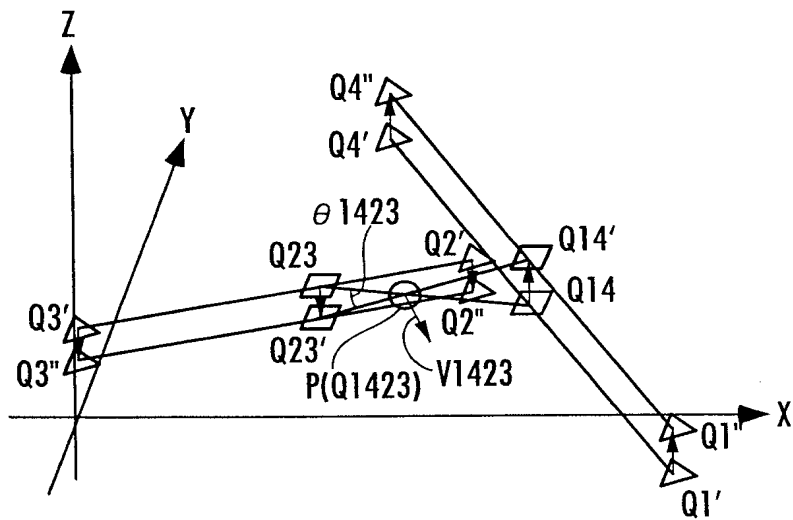
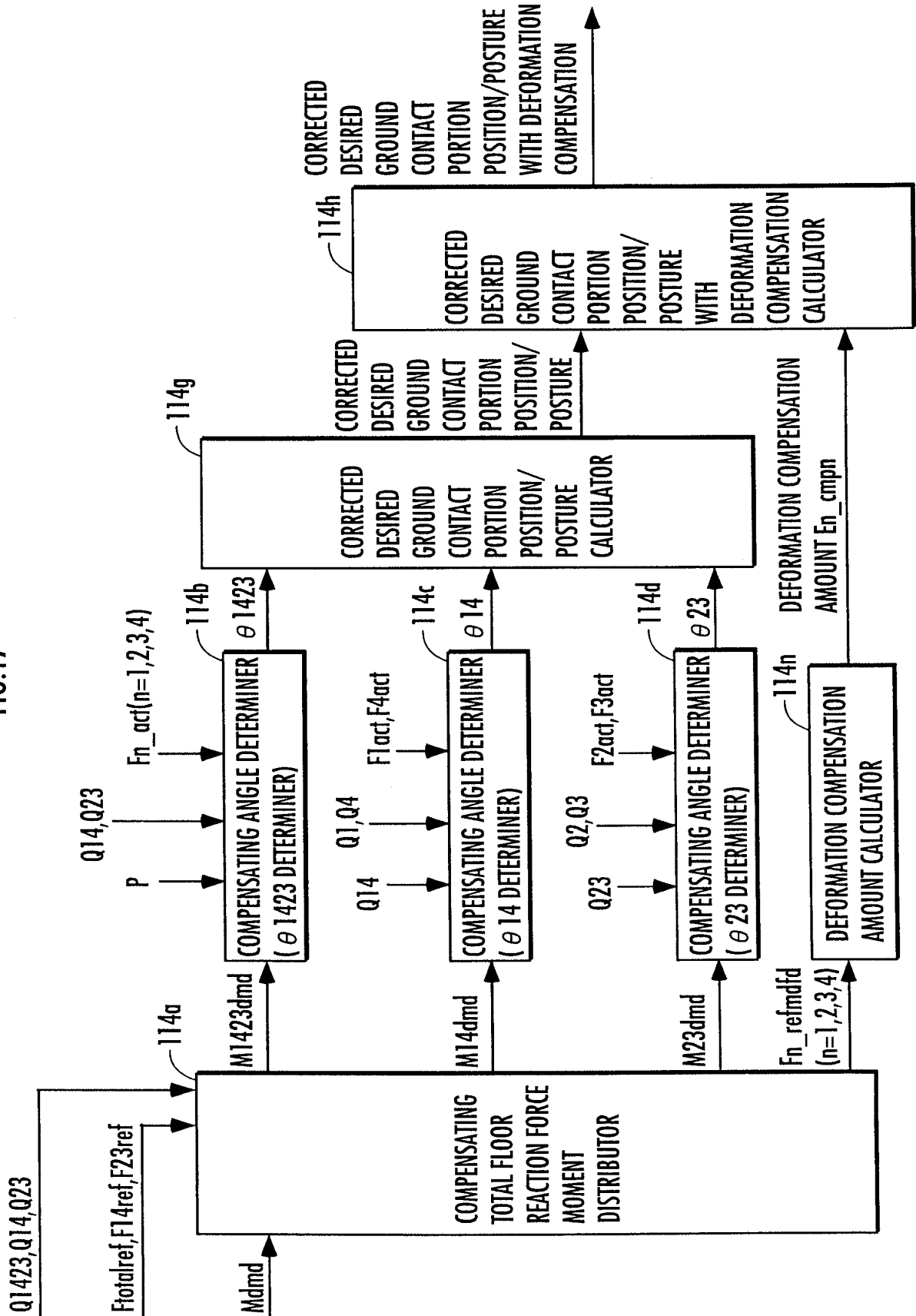


FIG.16



11 / 55

FIG. 17



12 / 55

FIG.18

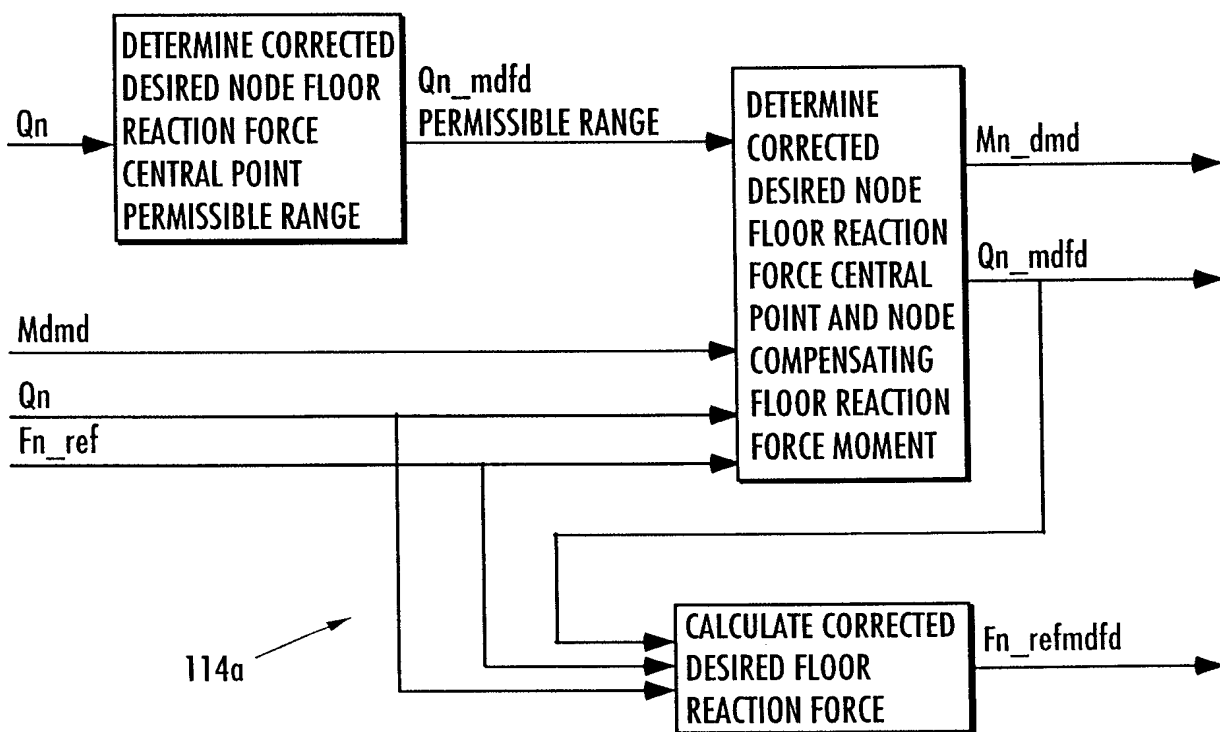


FIG.19

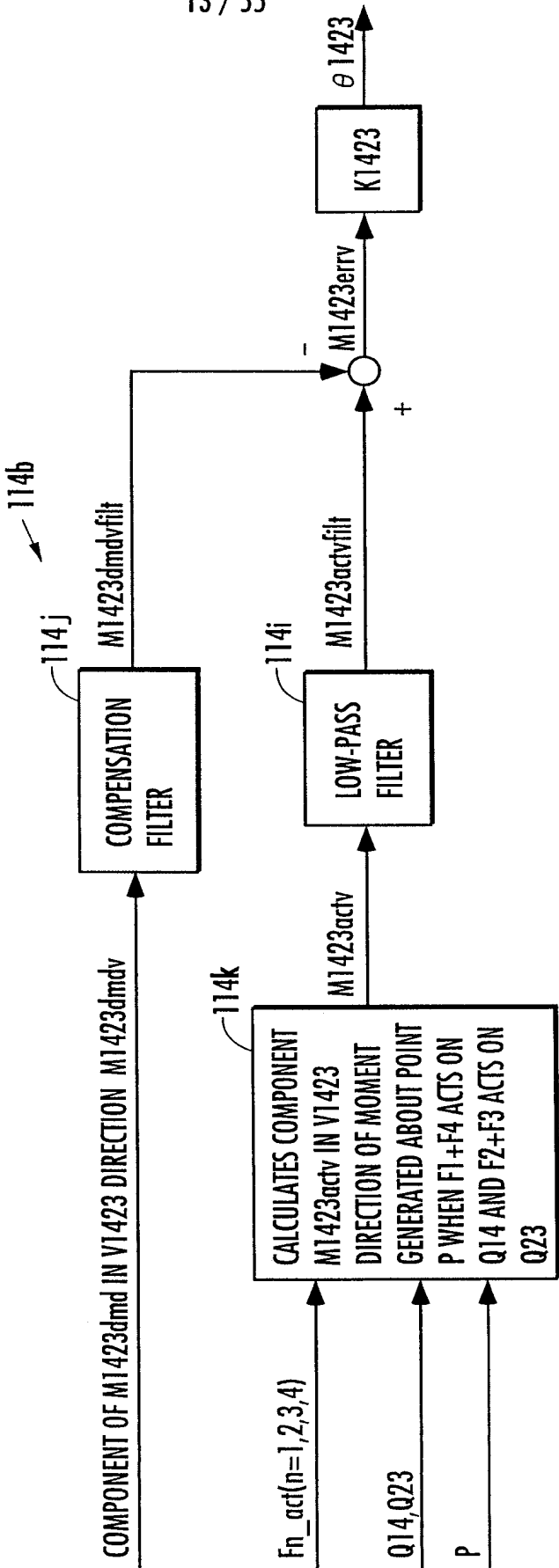
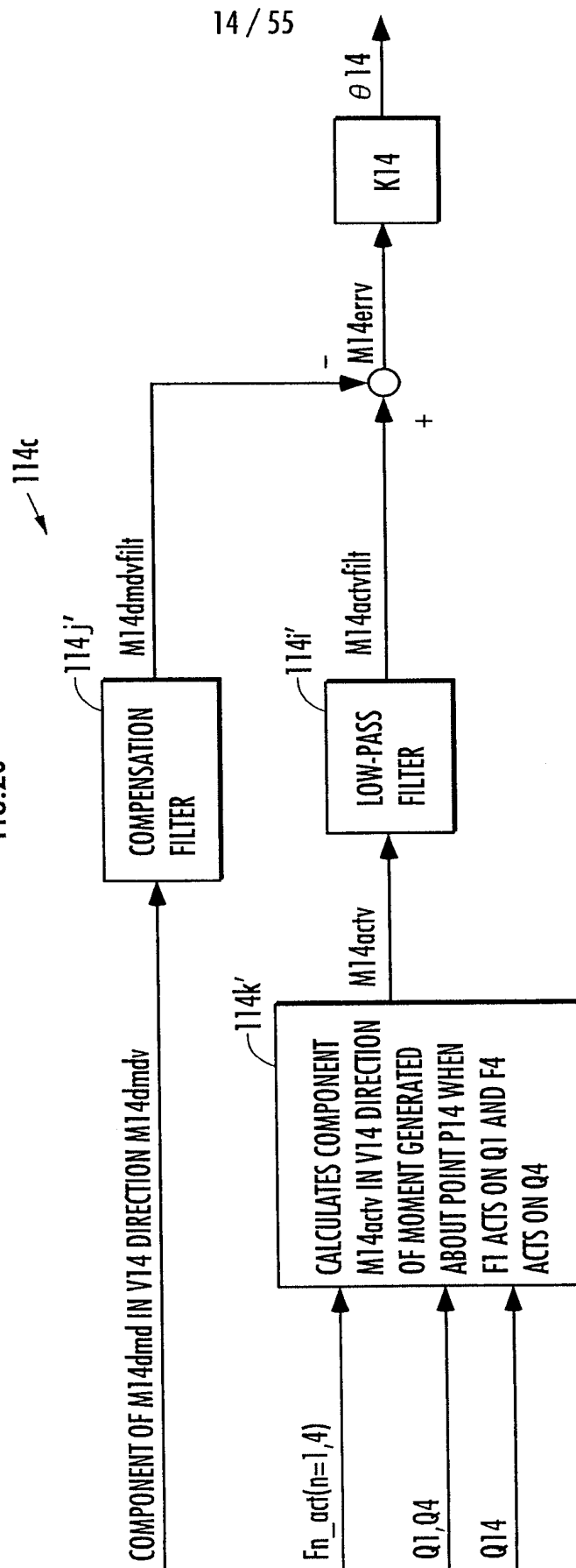
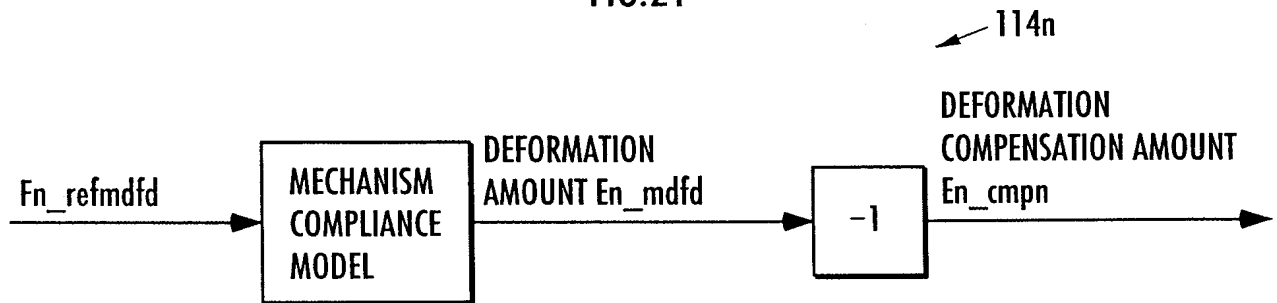


FIG. 20



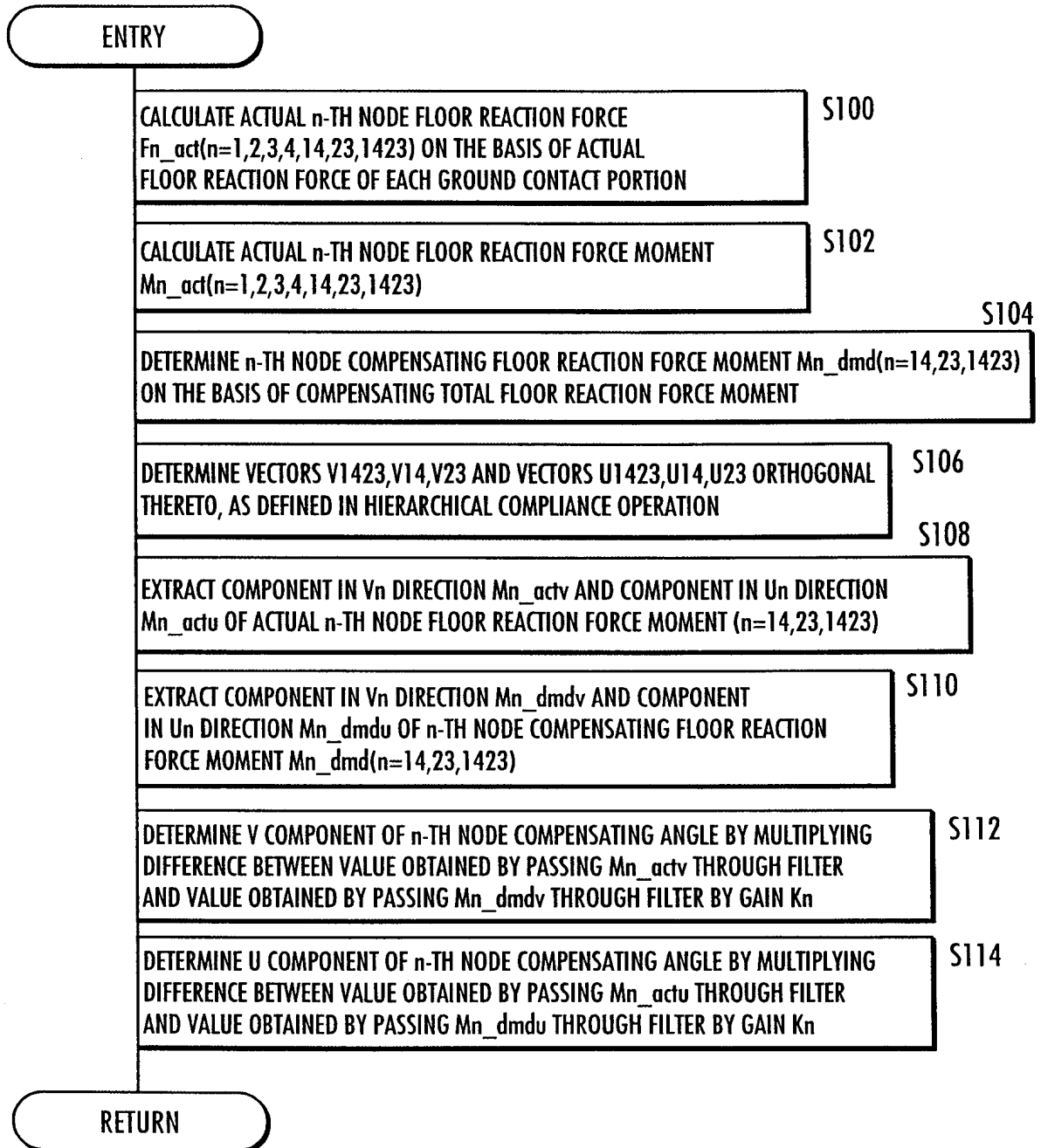
15 / 55

FIG.21



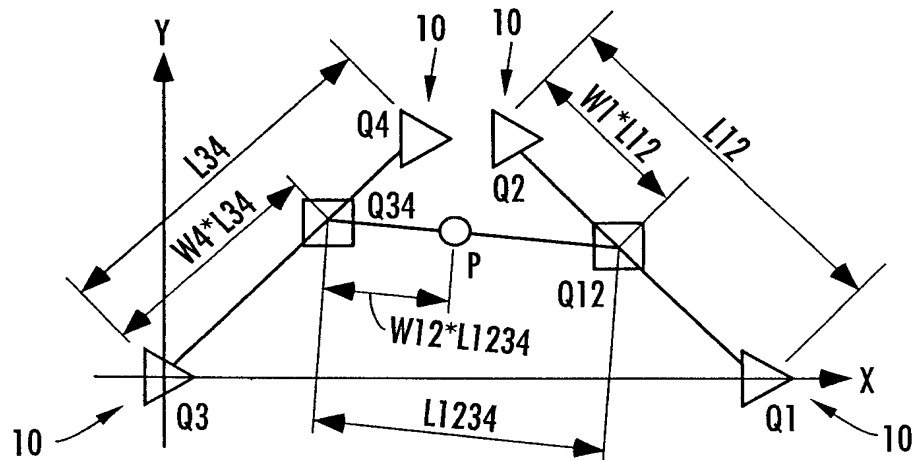
16 / 55

FIG.22



17 / 55

FIG.23



18 / 55

FIG.24

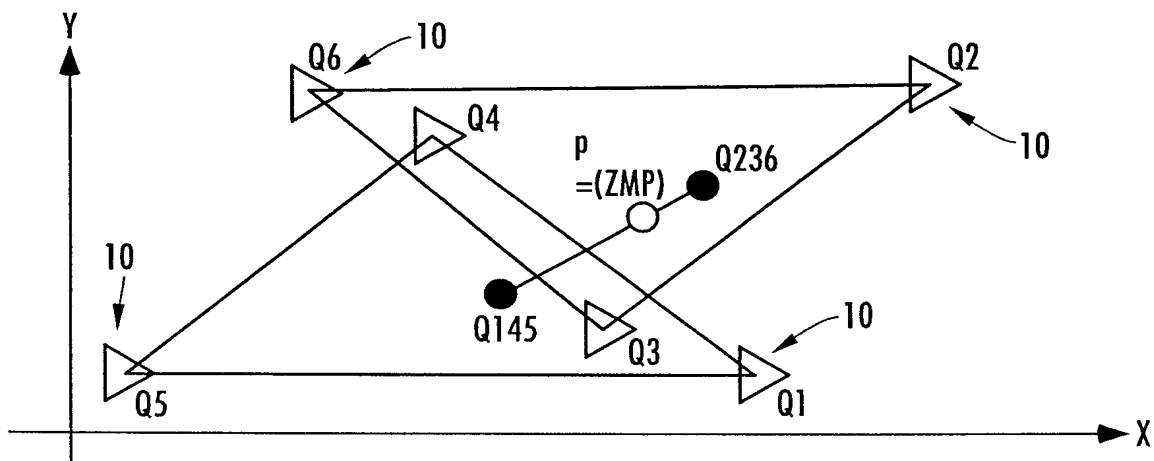
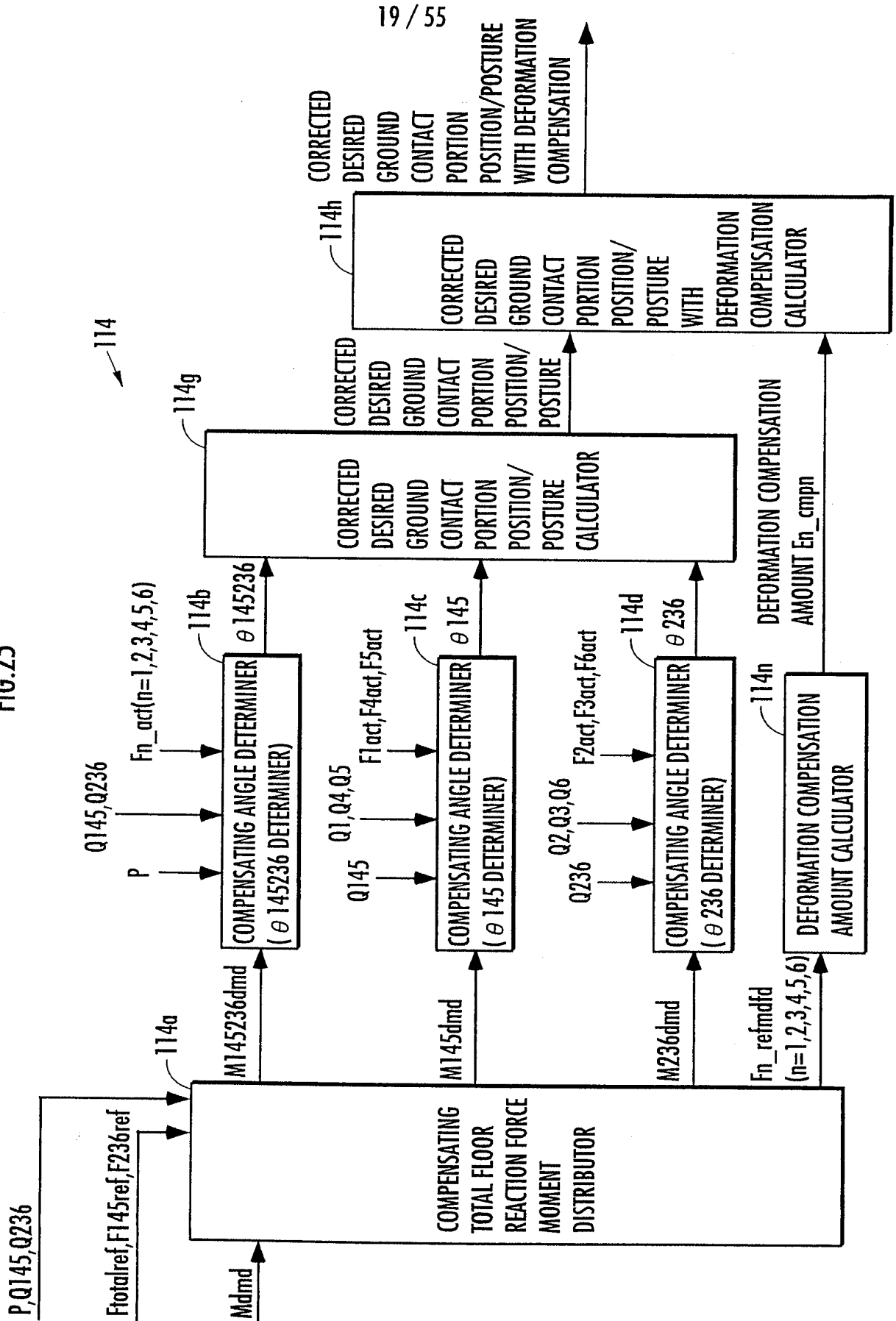


FIG. 25



20 / 55

FIG.26

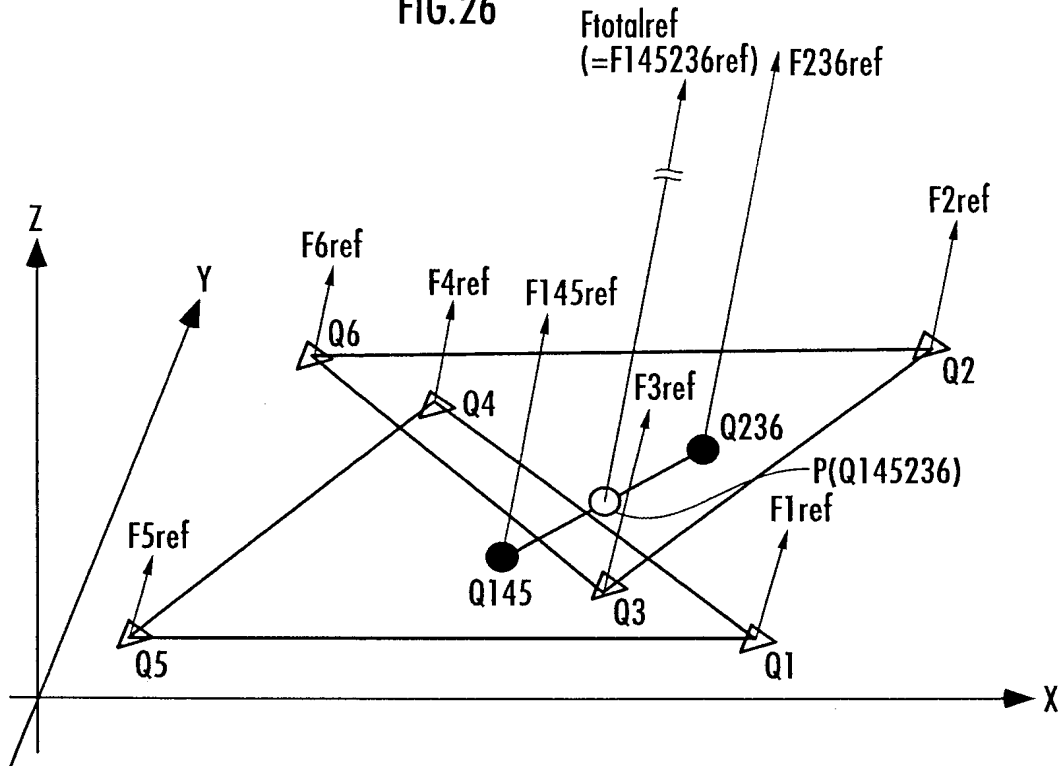
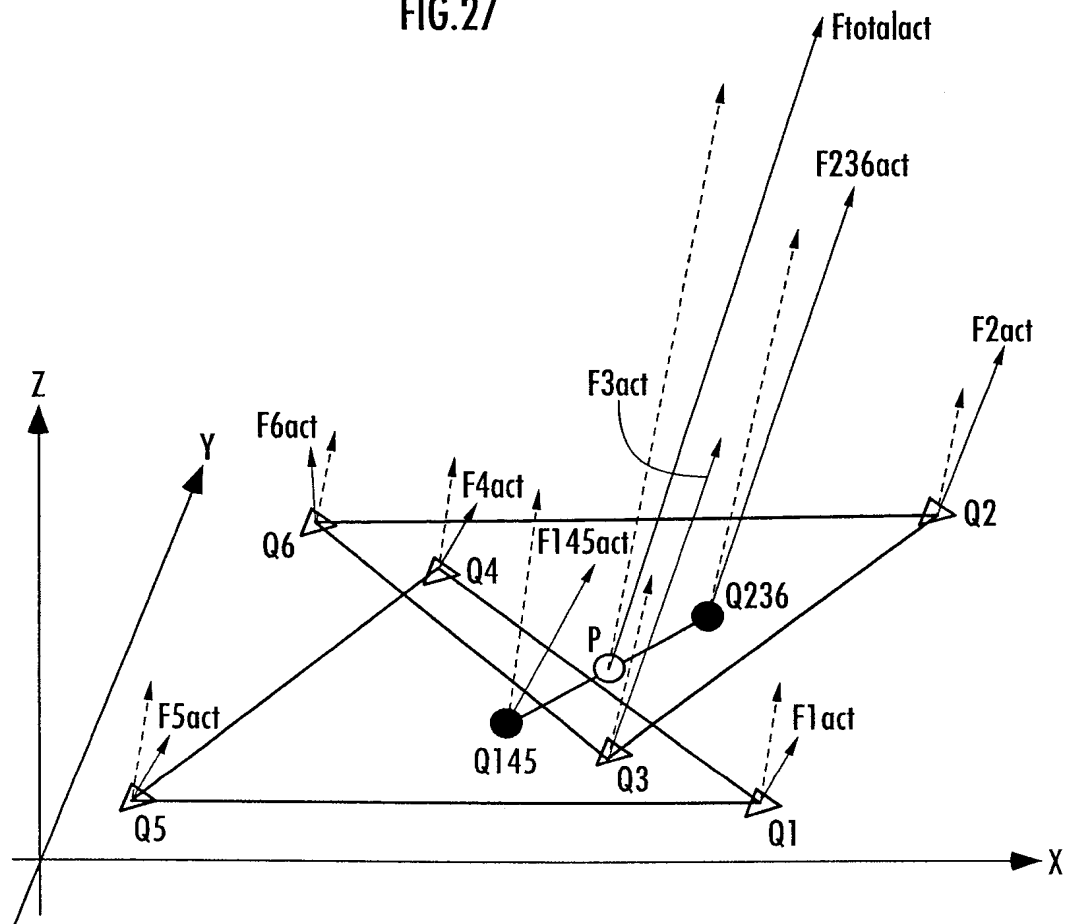
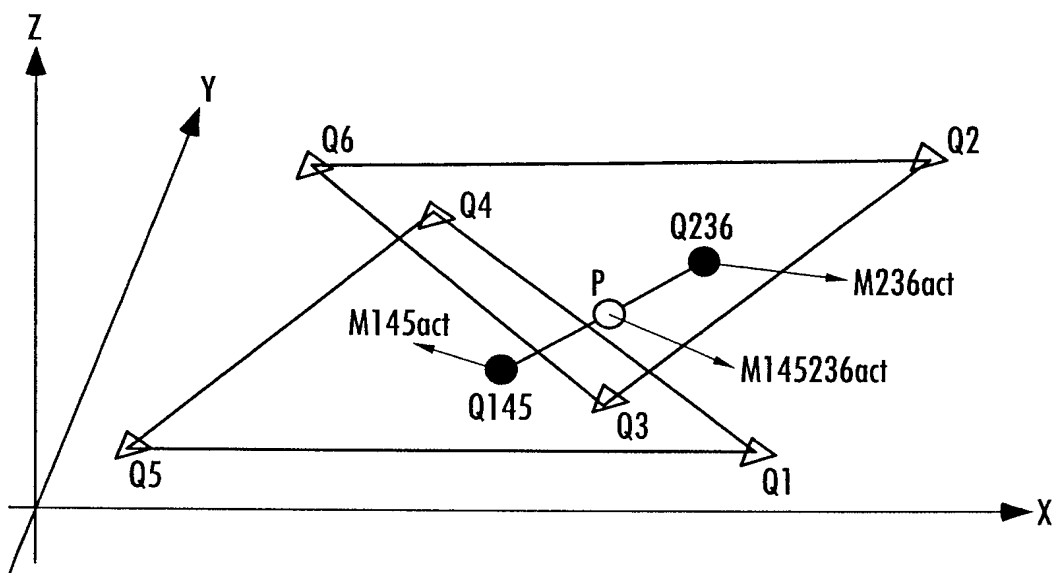


FIG.27



21 / 55

FIG.28



22 / 55

FIG.29(a)

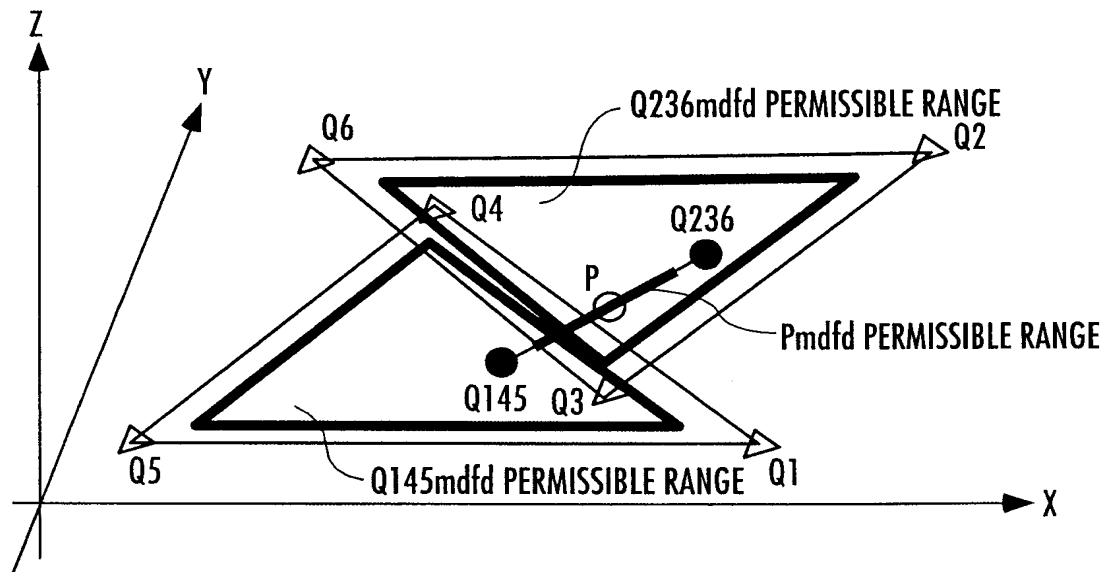
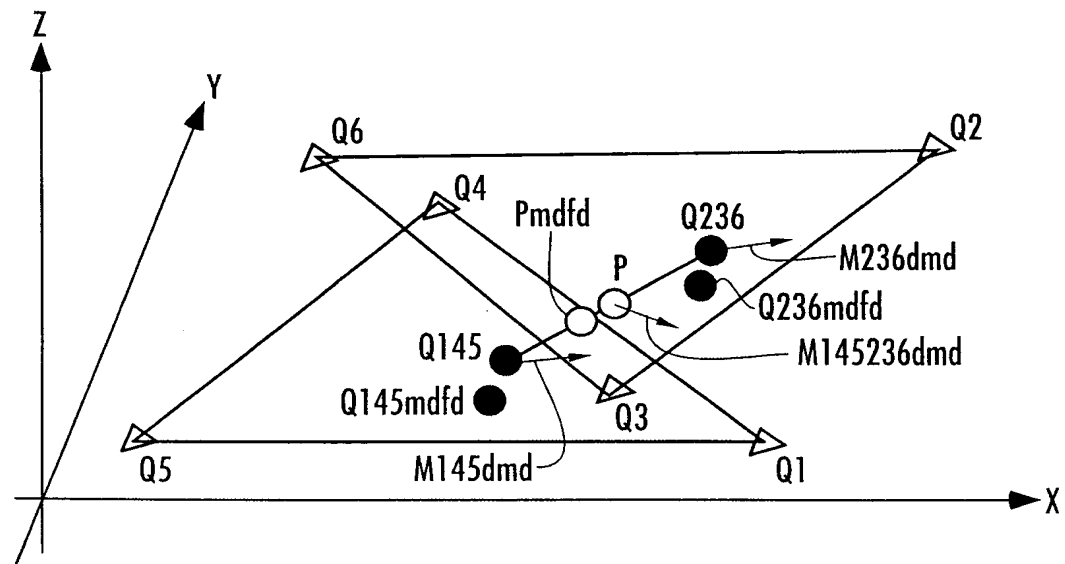


FIG.29(b)



23 / 55

FIG.30

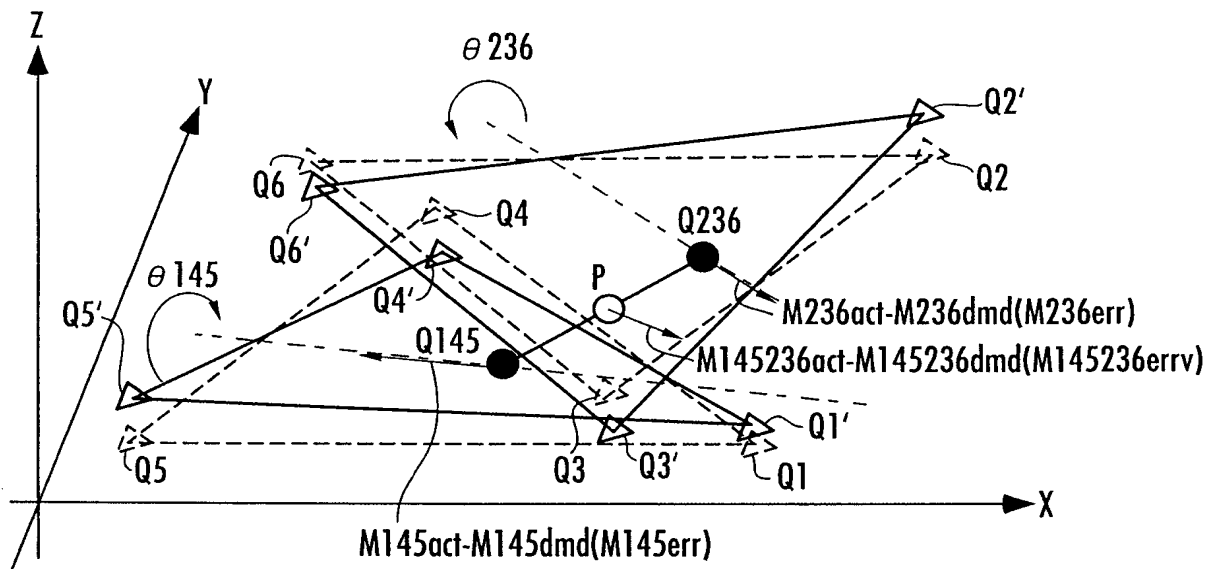


FIG.31

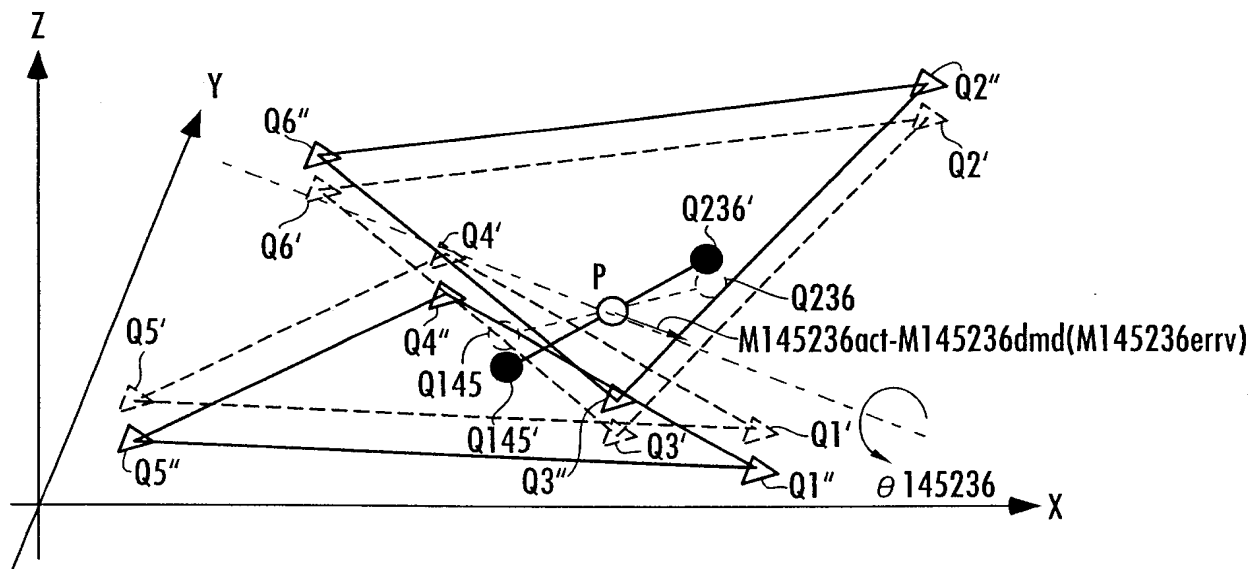
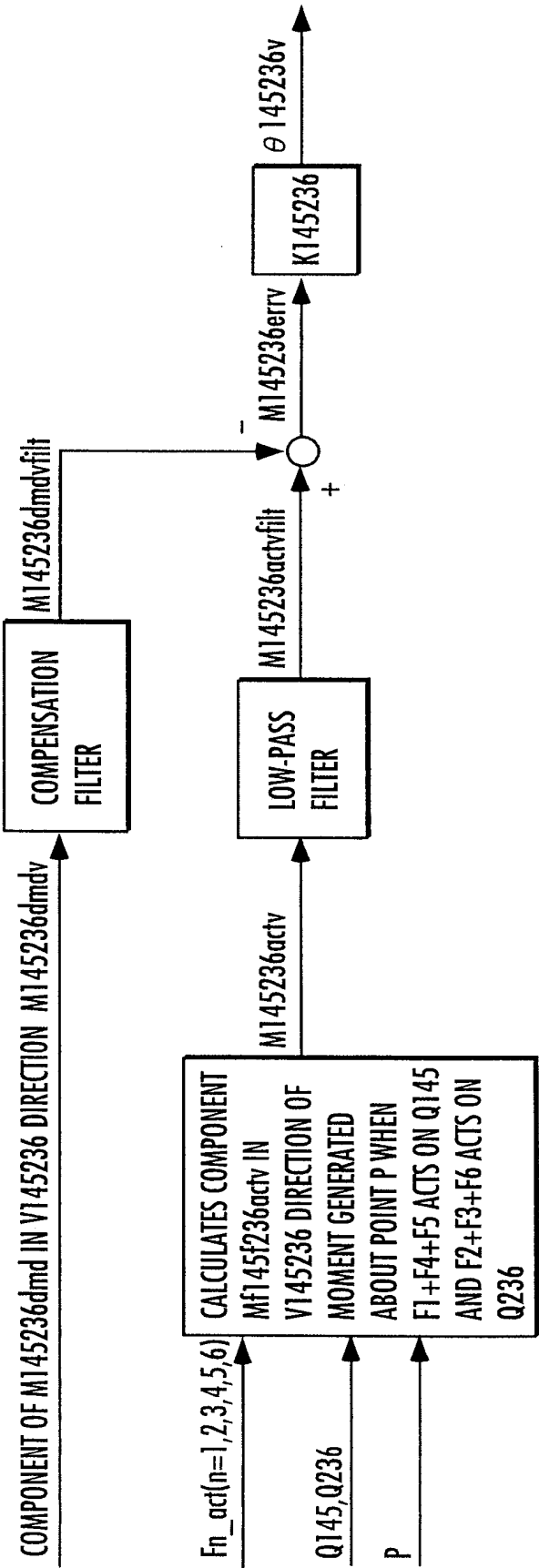
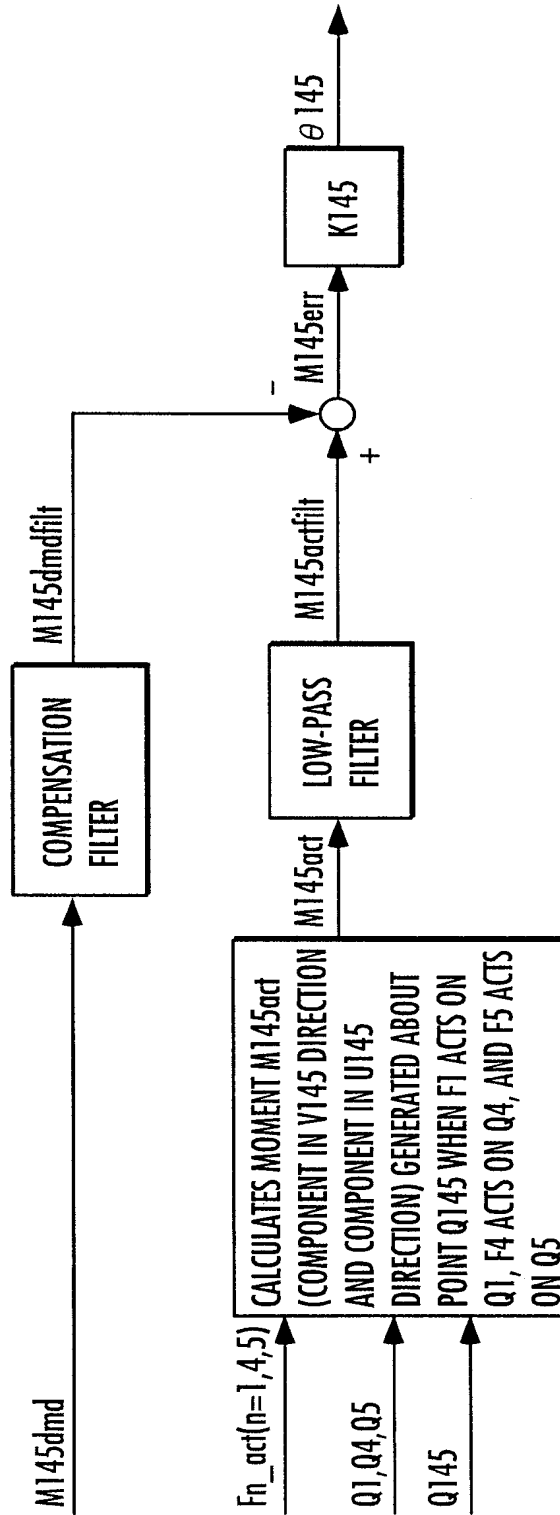


FIG.32



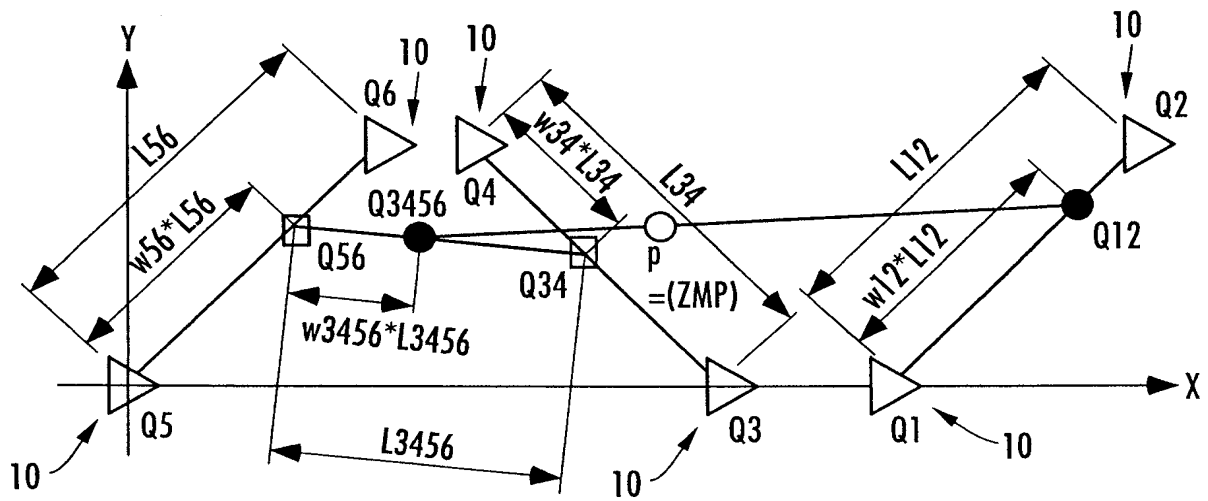
25 / 55

FIG.33



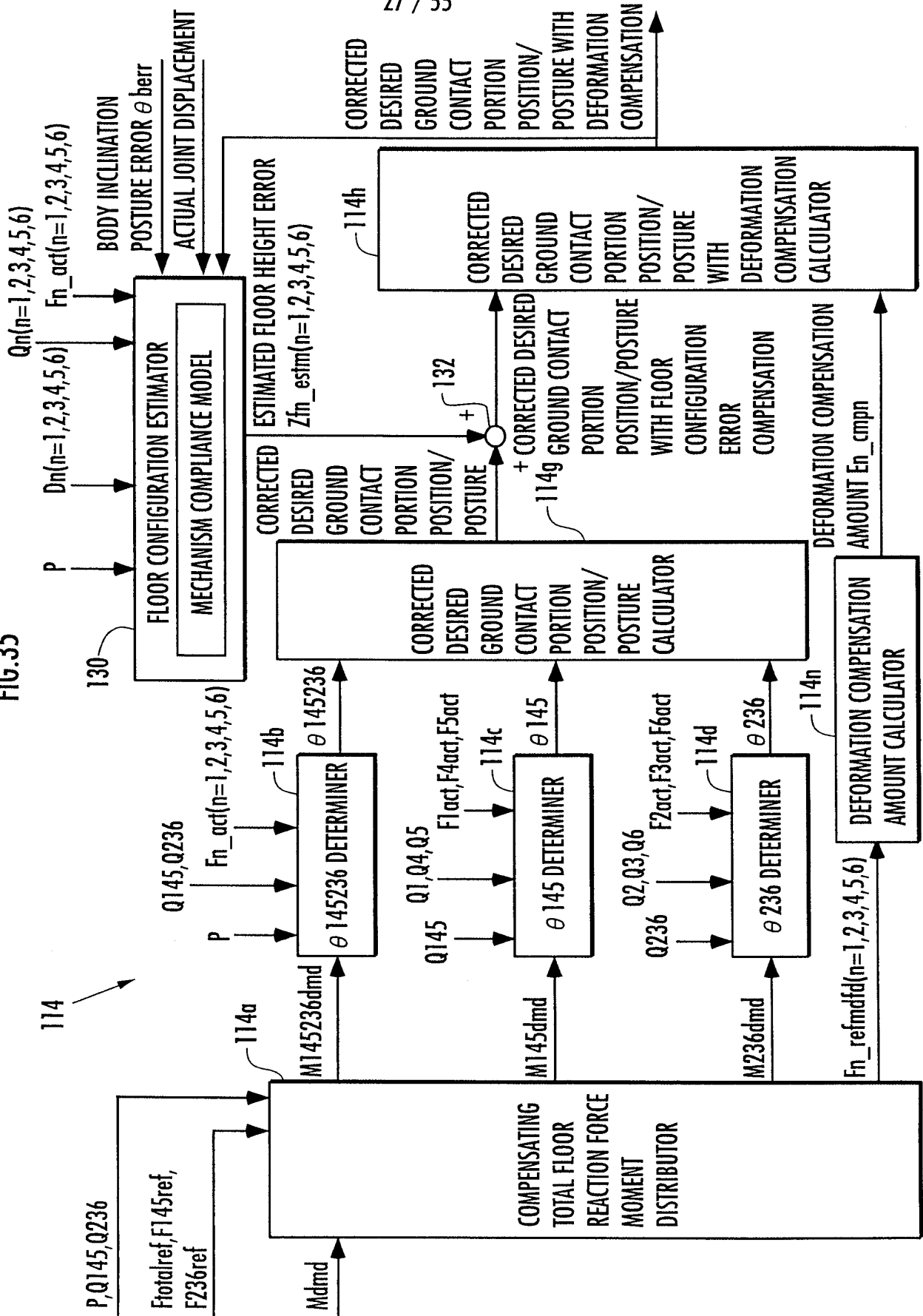
26 / 55

FIG.34



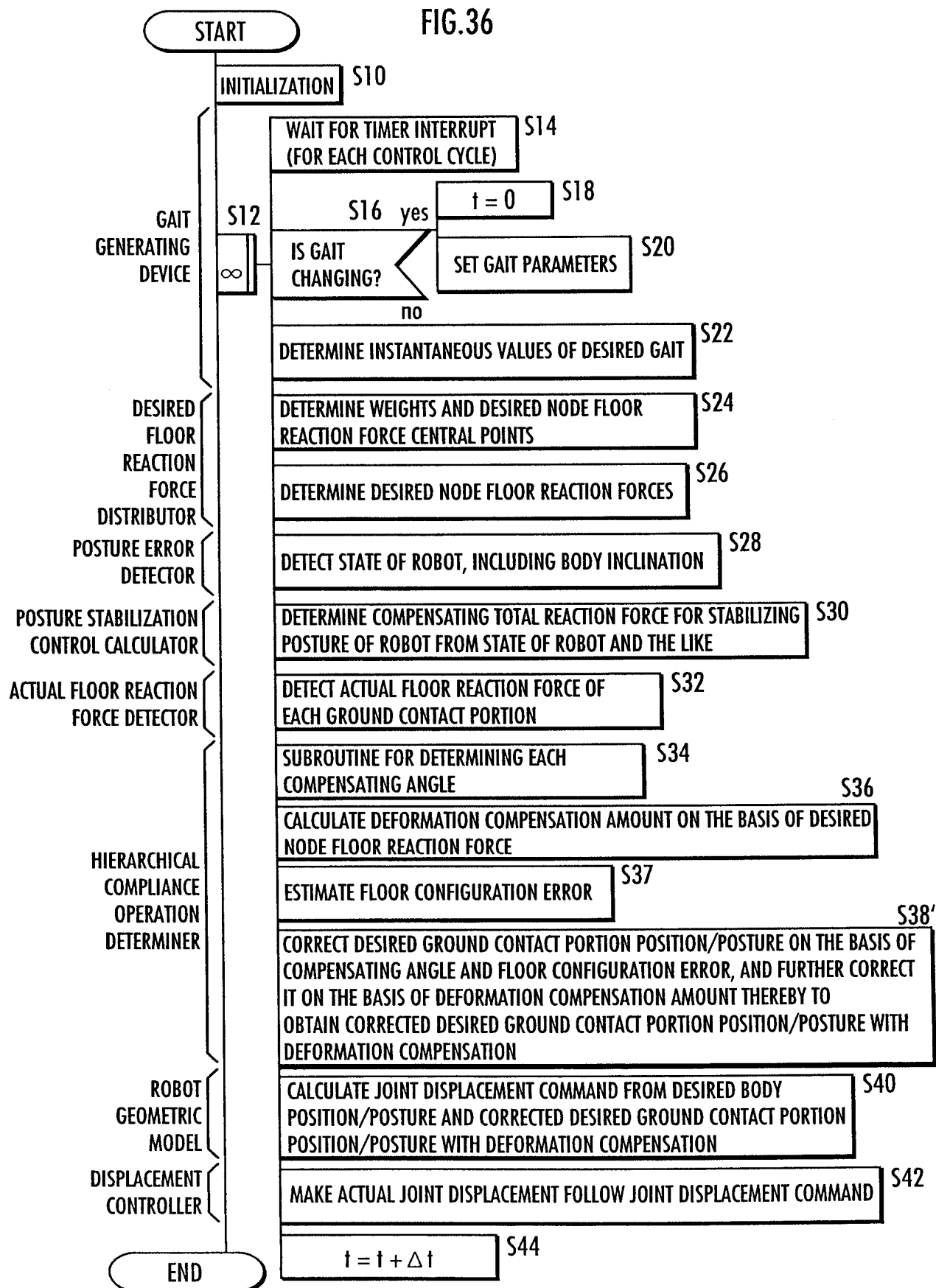
27 / 55

FIG.35



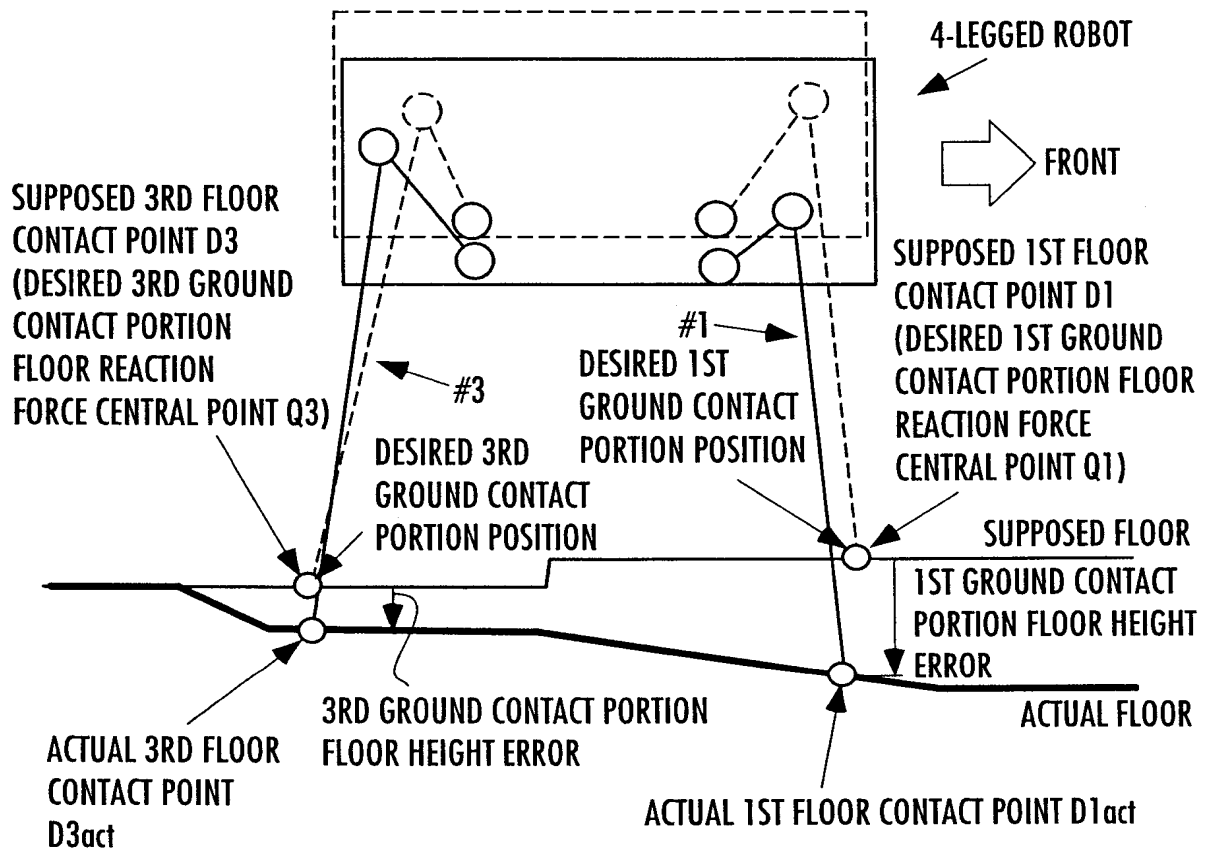
28 / 55

FIG.36



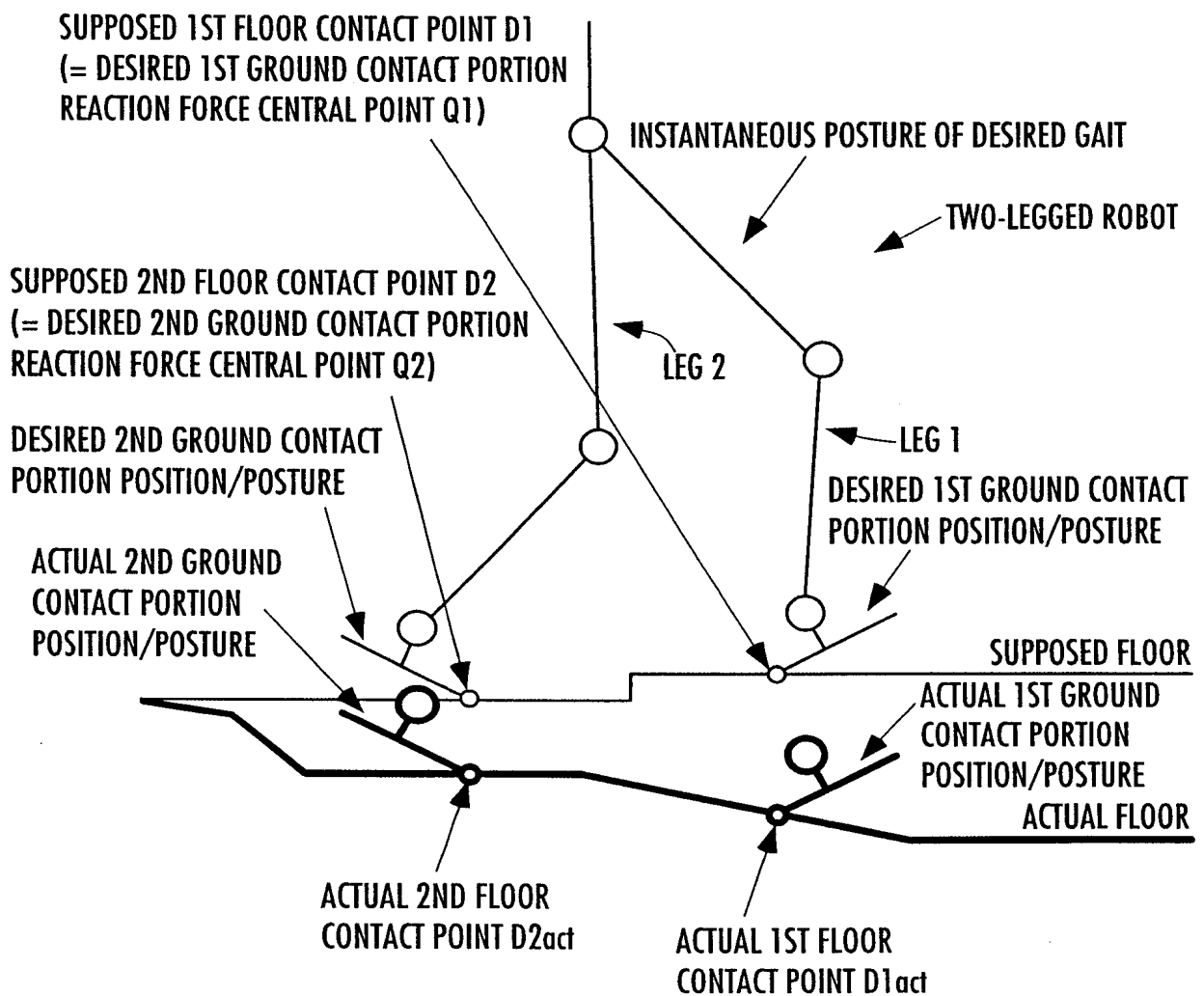
29 / 55

FIG.37



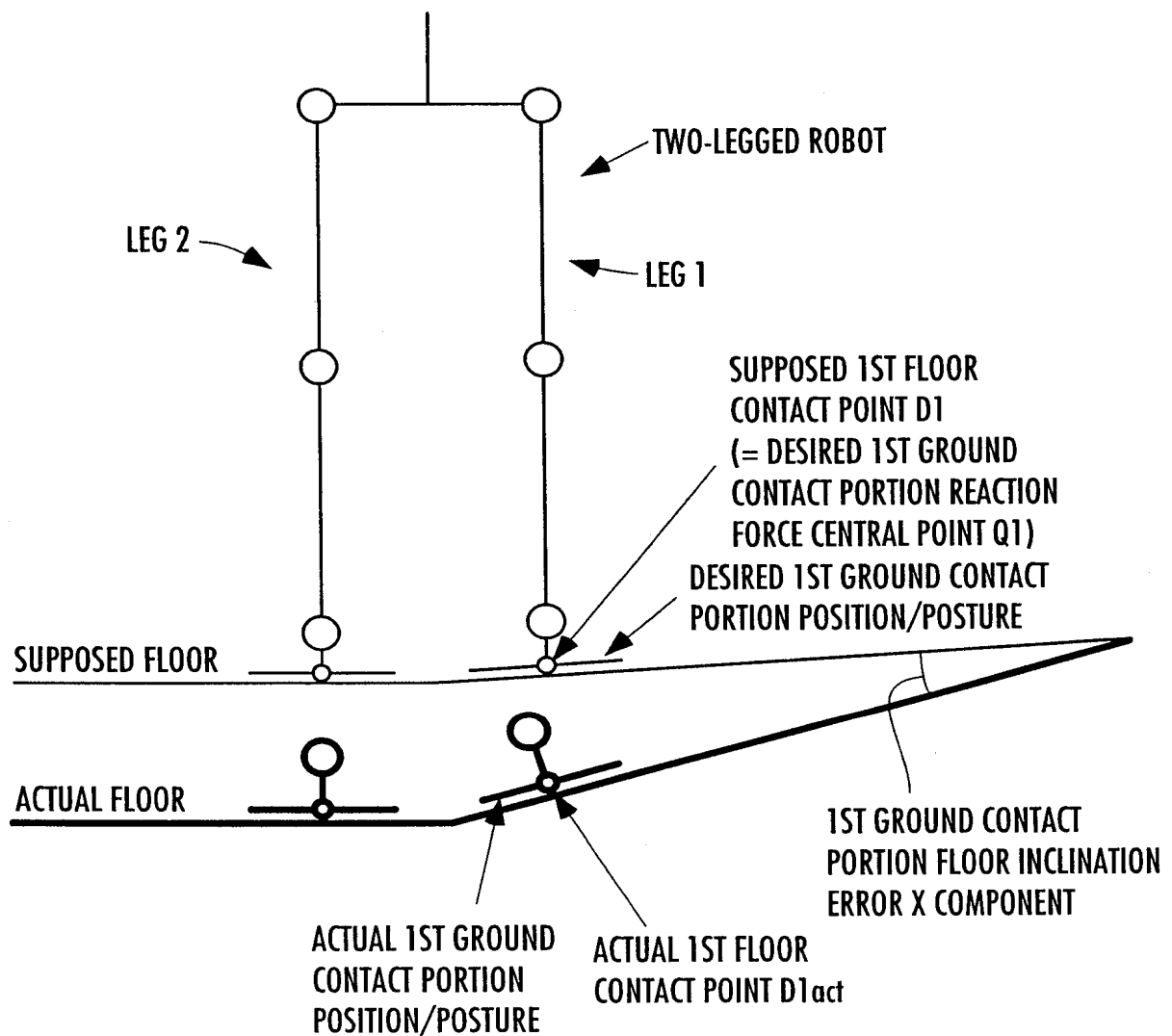
30 / 55

FIG.38



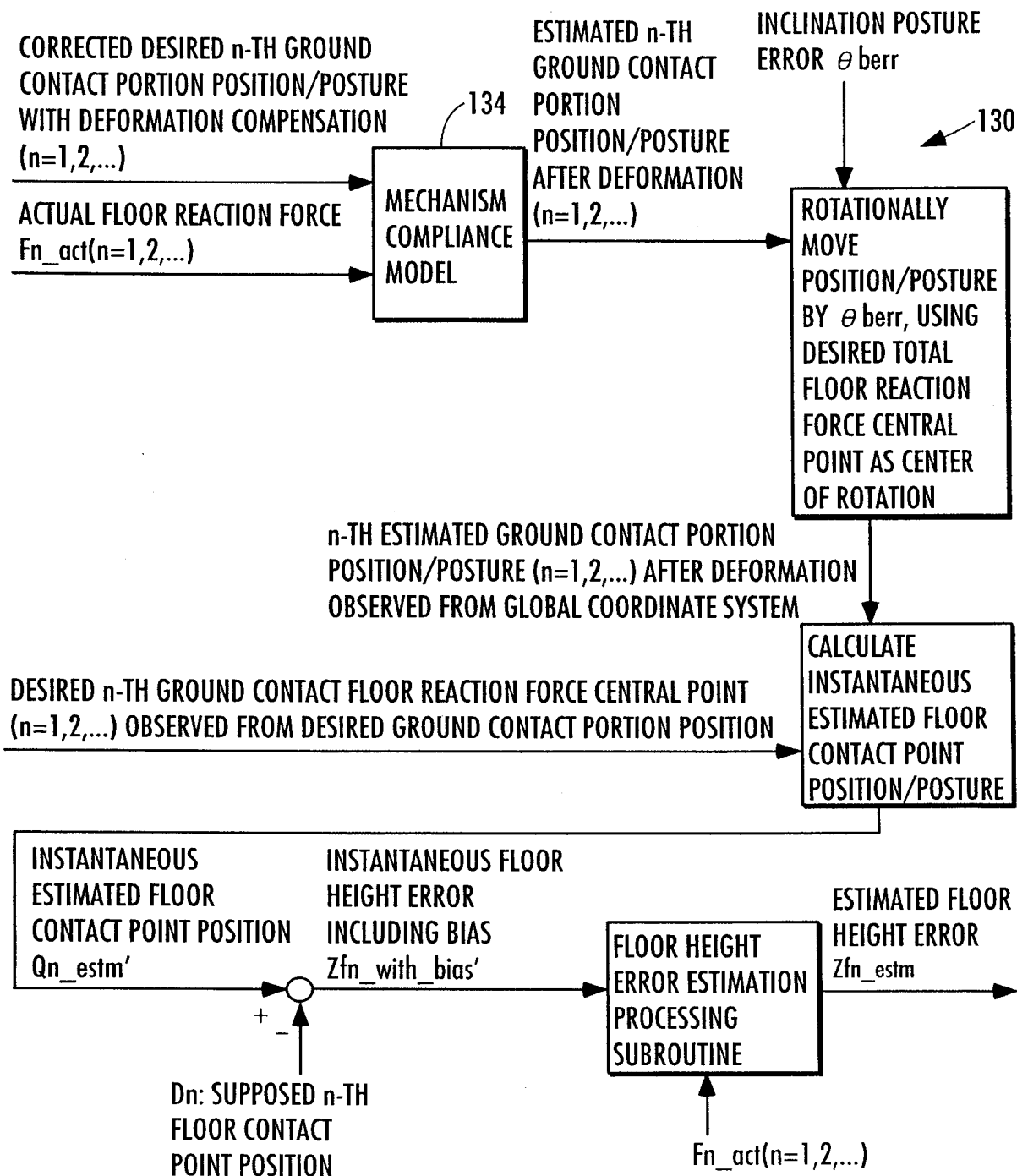
31 / 55

FIG.39



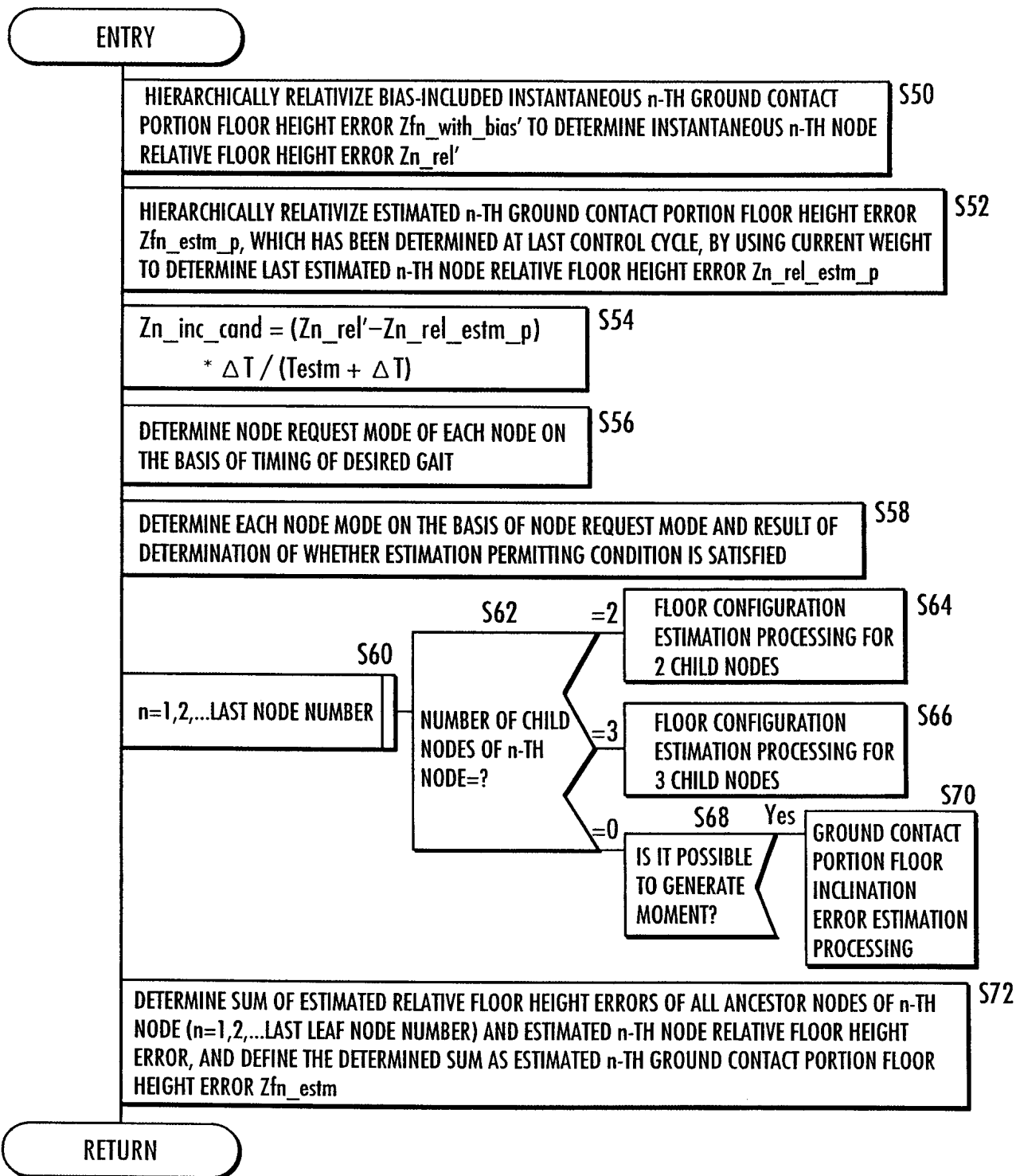
32 / 55

FIG.40



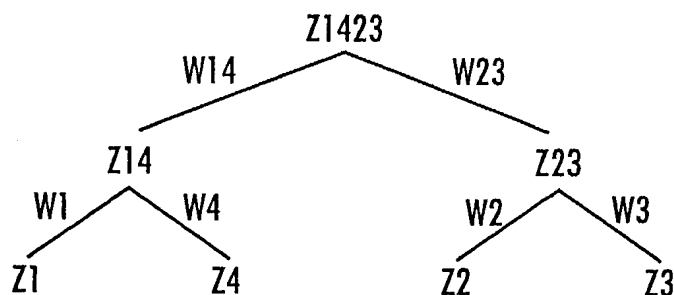
33 / 55

FIG.41



34 / 55

FIG.42



$$Z14_with_bias = W1 \cdot Z1_with_bias + W4 \cdot Z4_with_bias$$

$$Z23_with_bias = W2 \cdot Z2_with_bias + W3 \cdot Z3_with_bias$$

$$Z1423_with_bias = W14 \cdot Z14_with_bias + W23 \cdot Z23_with_bias$$

$$Z1_rel = Z1_with_bias - Z14_with_bias$$

$$Z4_rel = Z4_with_bias - Z14_with_bias$$

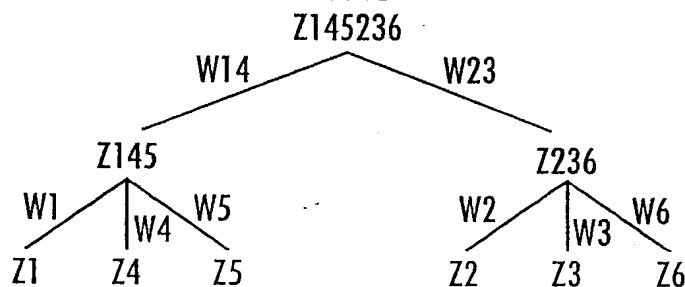
$$Z2_rel = Z2_with_bias - Z23_with_bias$$

$$Z3_rel = Z3_with_bias - Z23_with_bias$$

$$Z14_rel = Z14_with_bias - Z1423_with_bias$$

$$Z23_rel = Z23_with_bias - Z1423_with_bias$$

FIG.43



$$Z145_with_bias = W1 \cdot Z1_with_bias + W4 \cdot Z4_with_bias + W5 \cdot Z5_with_bias$$

$$Z236_with_bias = W2 \cdot Z2_with_bias + W3 \cdot Z3_with_bias + W6 \cdot Z6_with_bias$$

$$Z145236_with_bias = W145 \cdot Z145_with_bias + W236 \cdot Z236_with_bias$$

$$Z1_rel = Z1_with_bias - Z145_with_bias$$

$$Z4_rel = Z4_with_bias - Z145_with_bias$$

$$Z5_rel = Z5_with_bias - Z145_with_bias$$

$$Z2_rel = Z2_with_bias - Z236_with_bias$$

$$Z3_rel = Z3_with_bias - Z236_with_bias$$

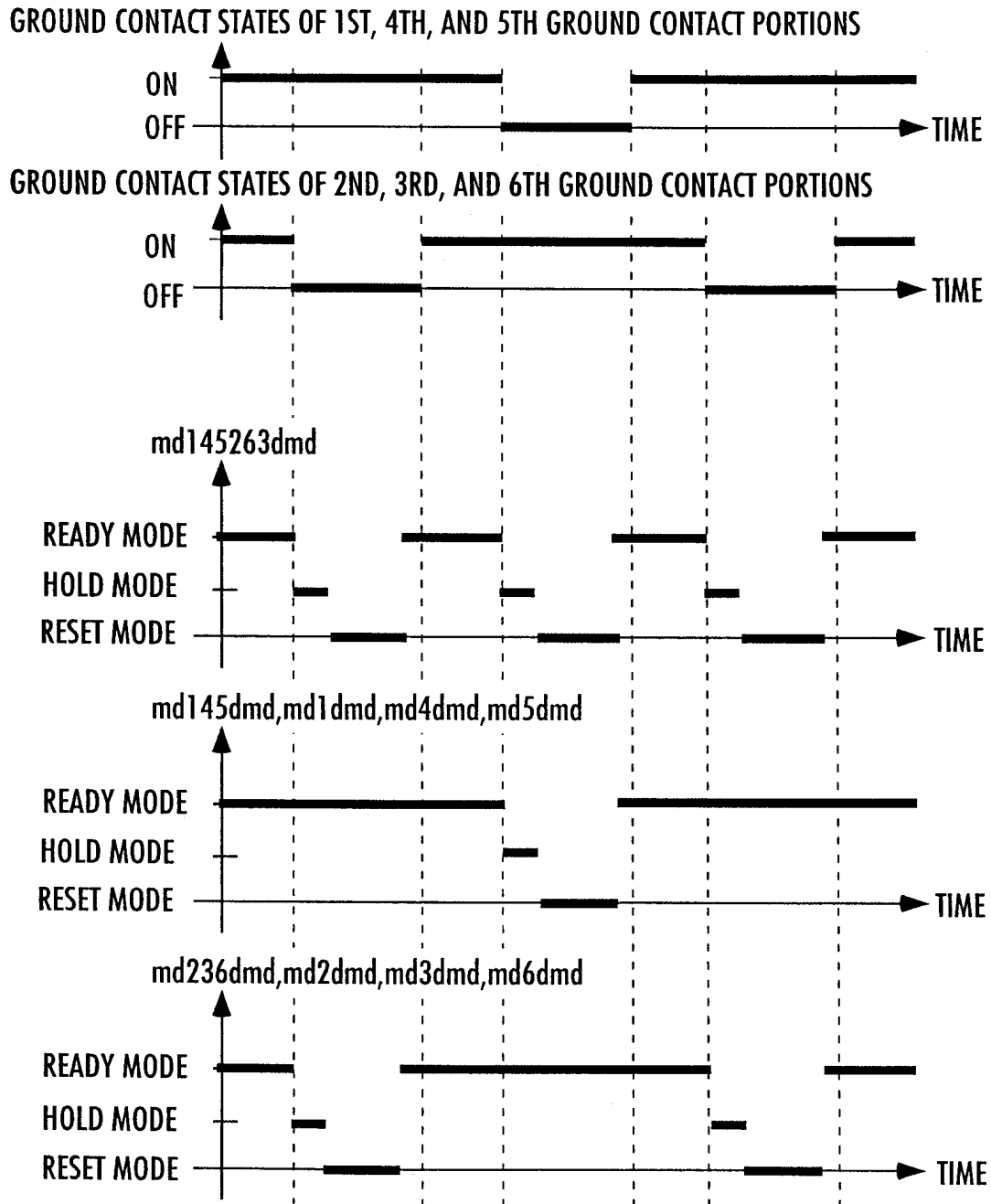
$$Z6_rel = Z6_with_bias - Z236_with_bias$$

$$Z145_rel = Z145_with_bias - Z145236_with_bias$$

$$Z236_rel = Z236_with_bias - Z145236_with_bias$$

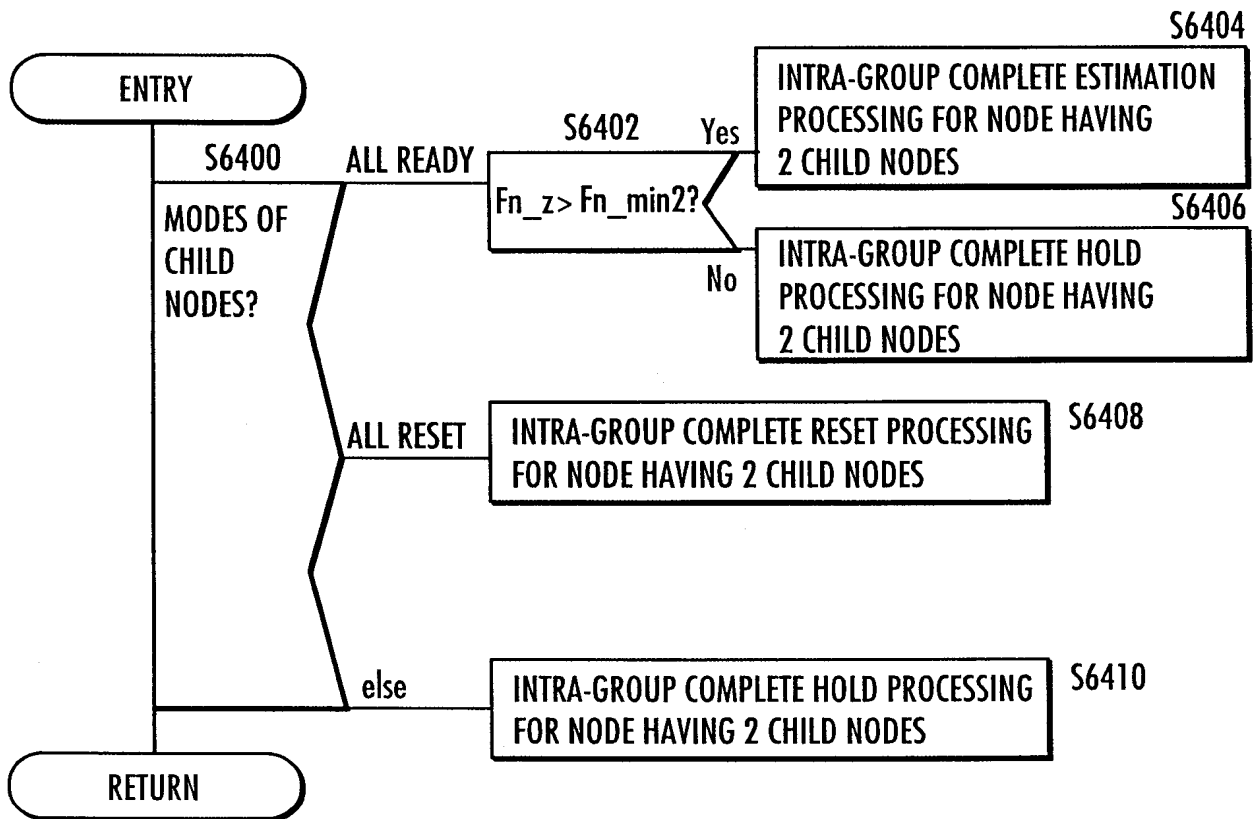
35 / 55

FIG.44



36 / 55

FIG.45



37 / 55

FIG.46

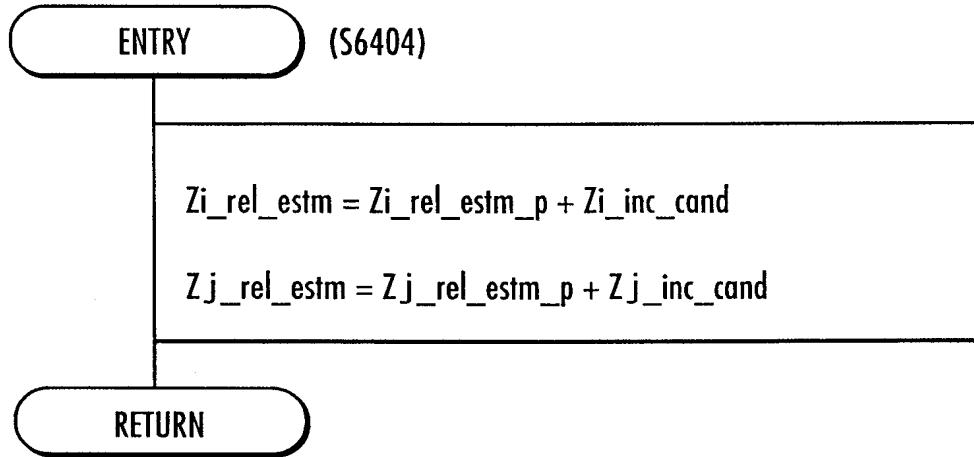


FIG.47

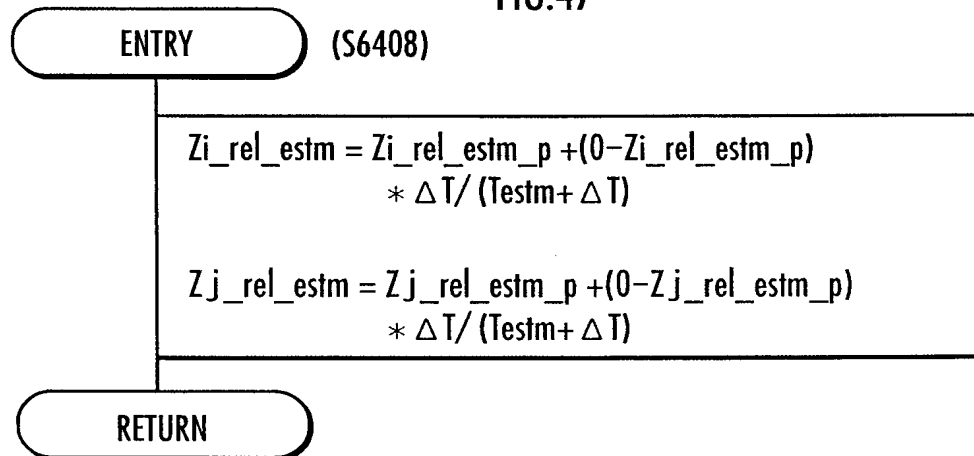
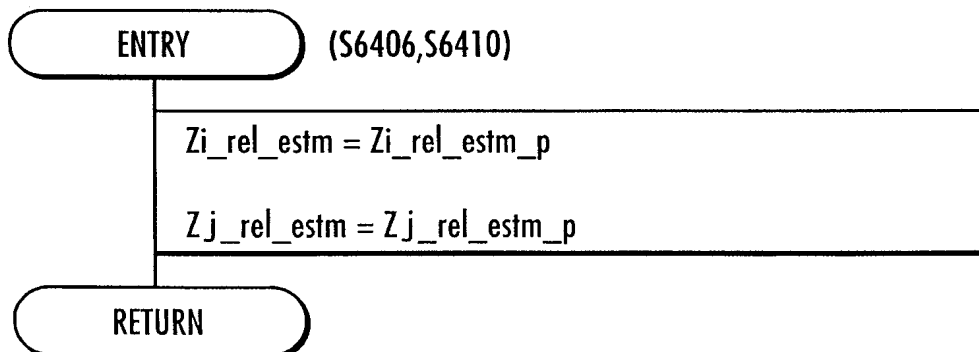
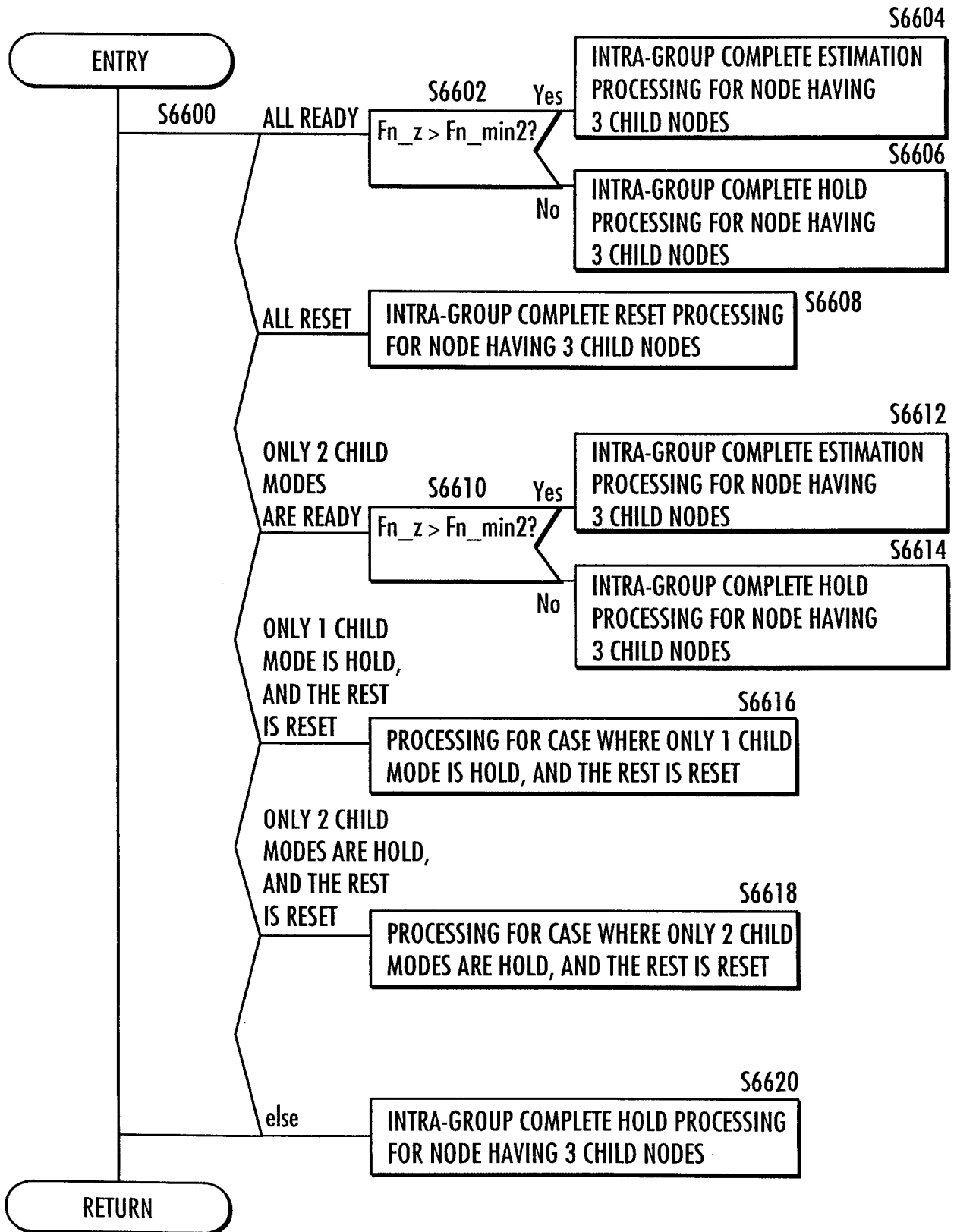


FIG.48



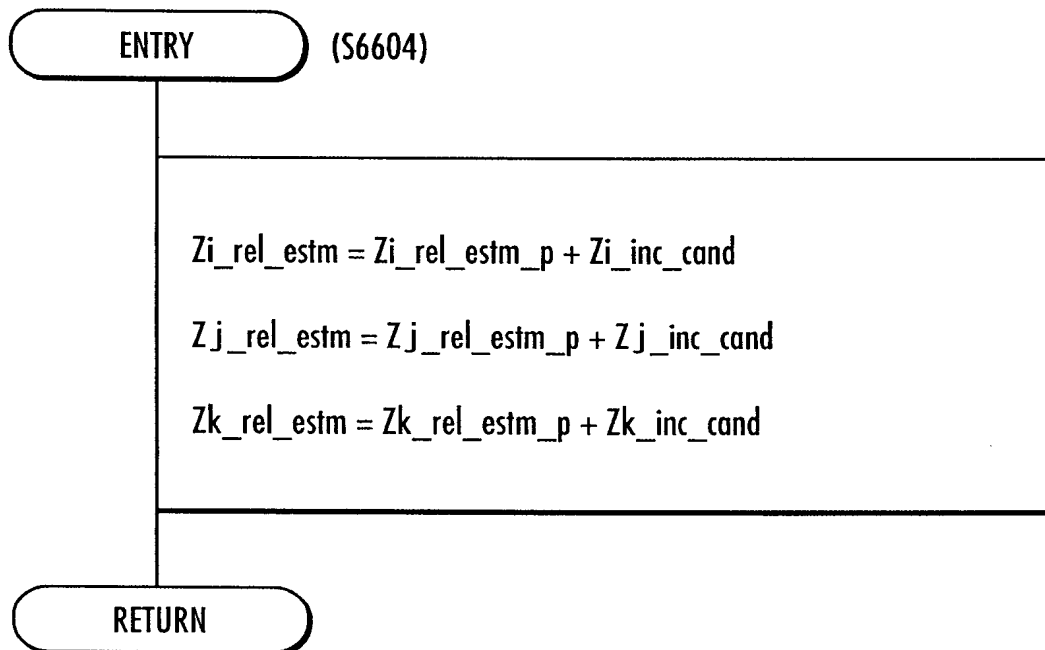
38 / 55

FIG.49



39 / 55

FIG.50



40 / 55

FIG.51

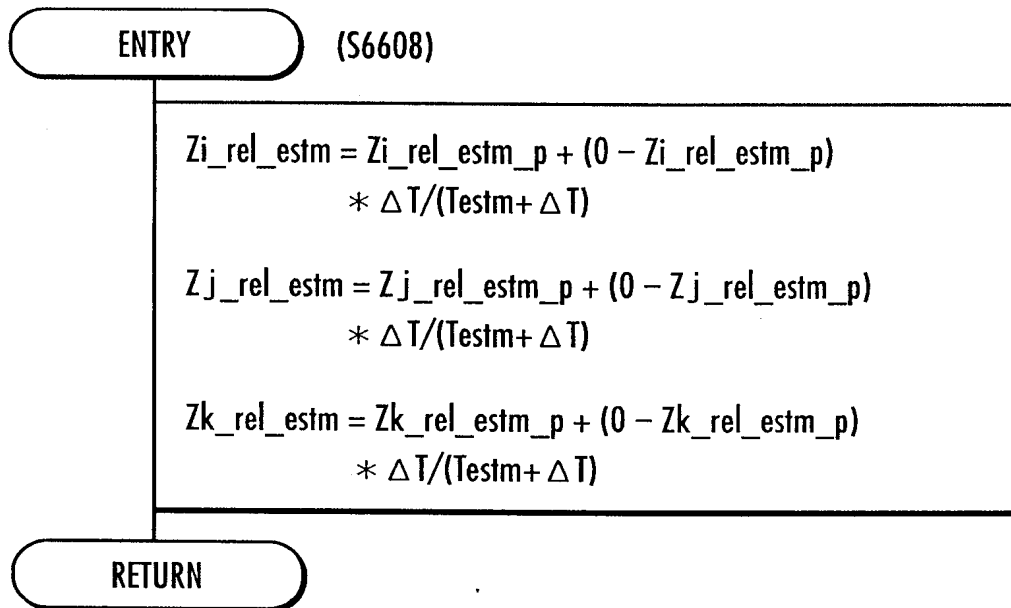
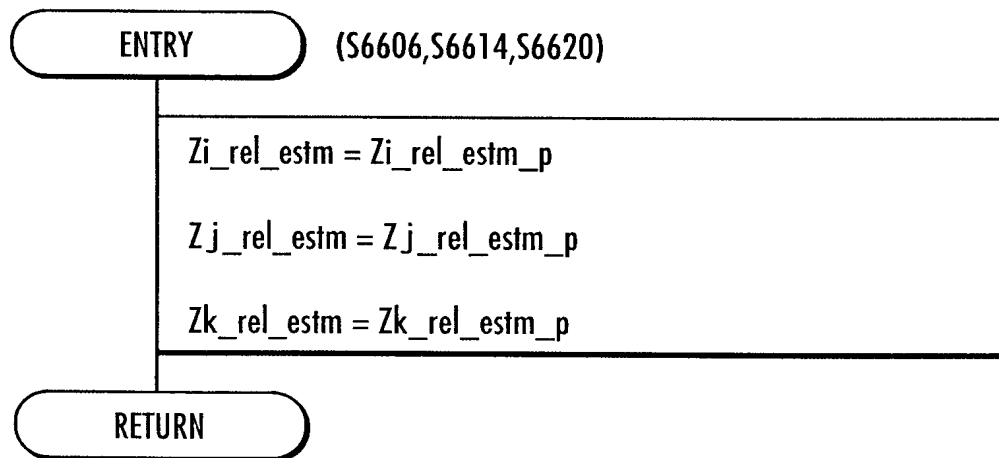
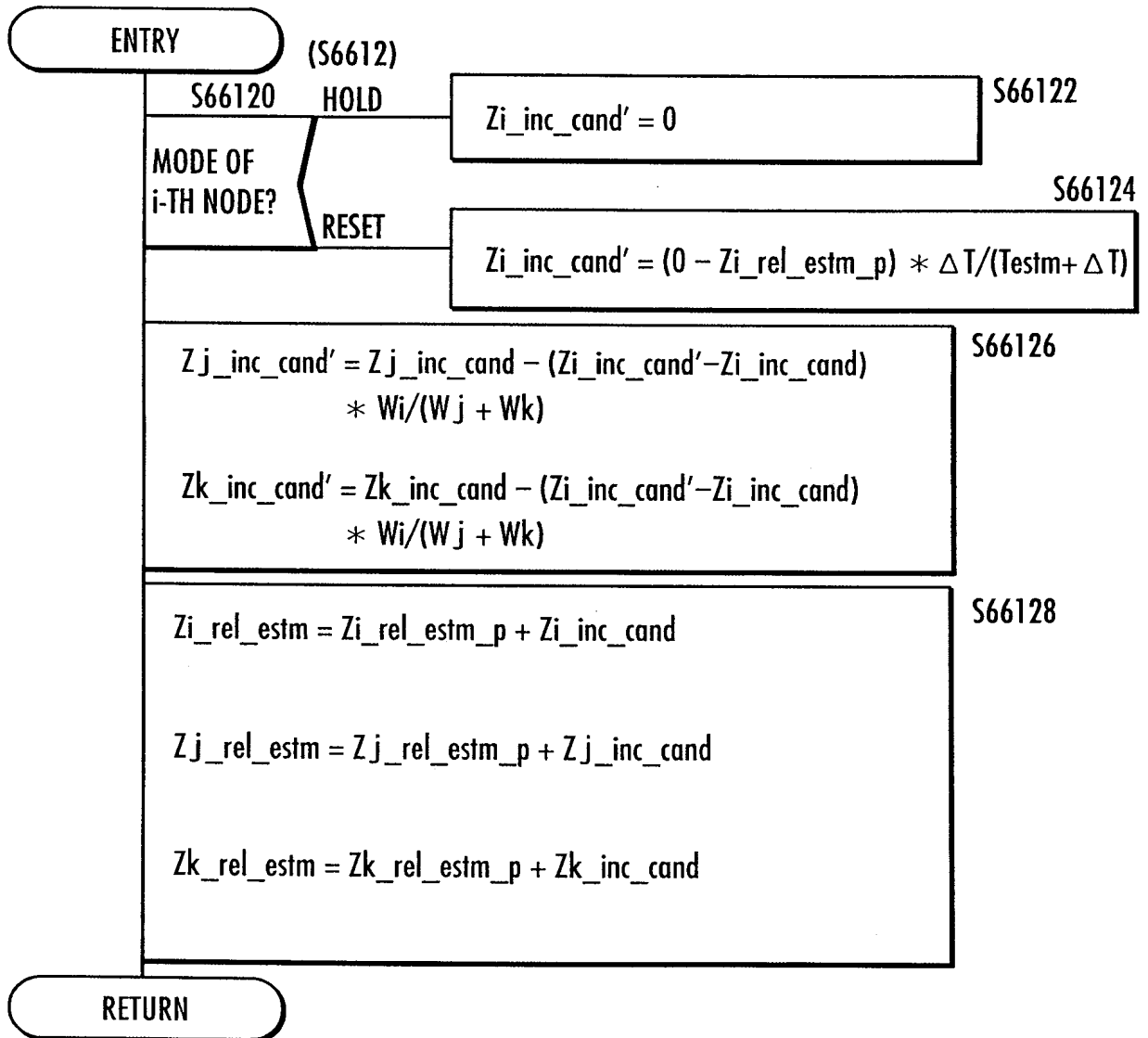


FIG.52



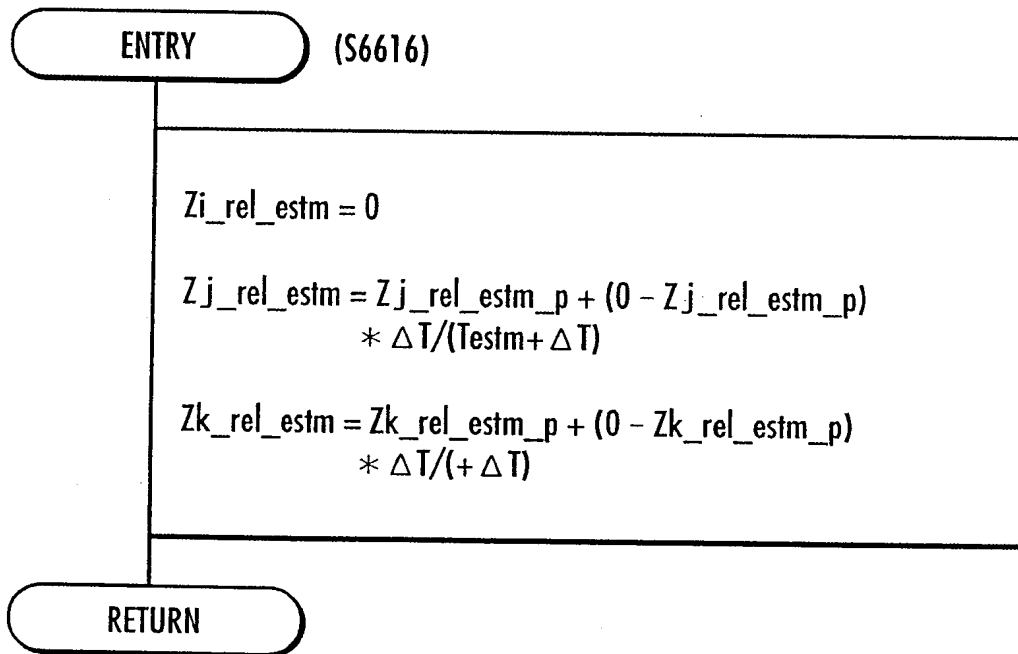
41 / 55

FIG.53



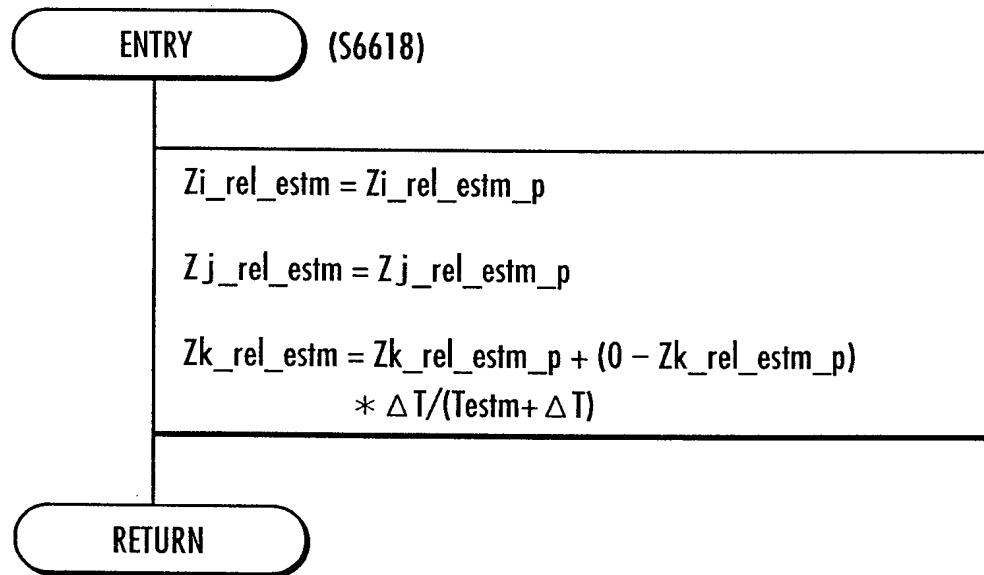
42 / 55

FIG.54



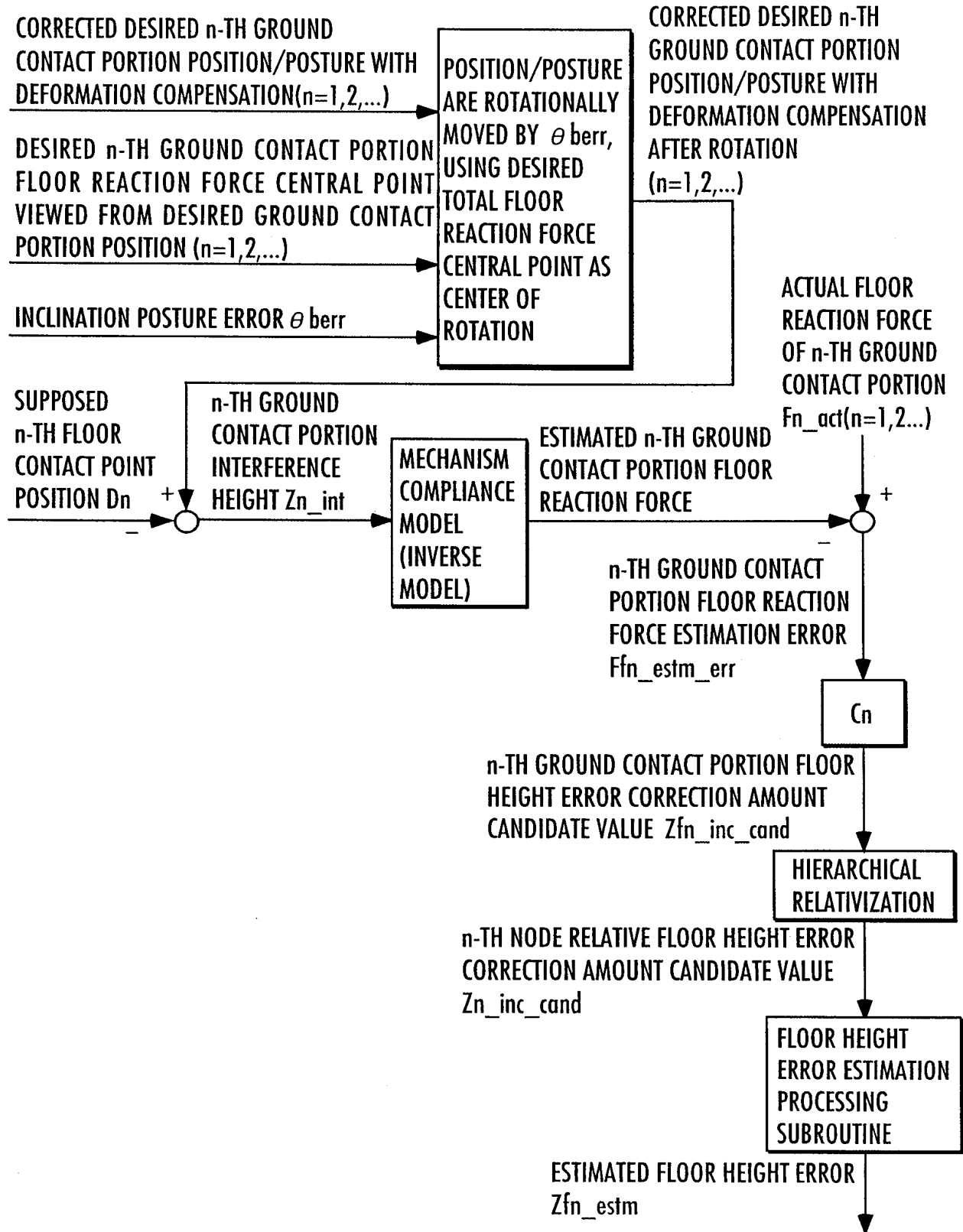
43 / 55

FIG.55



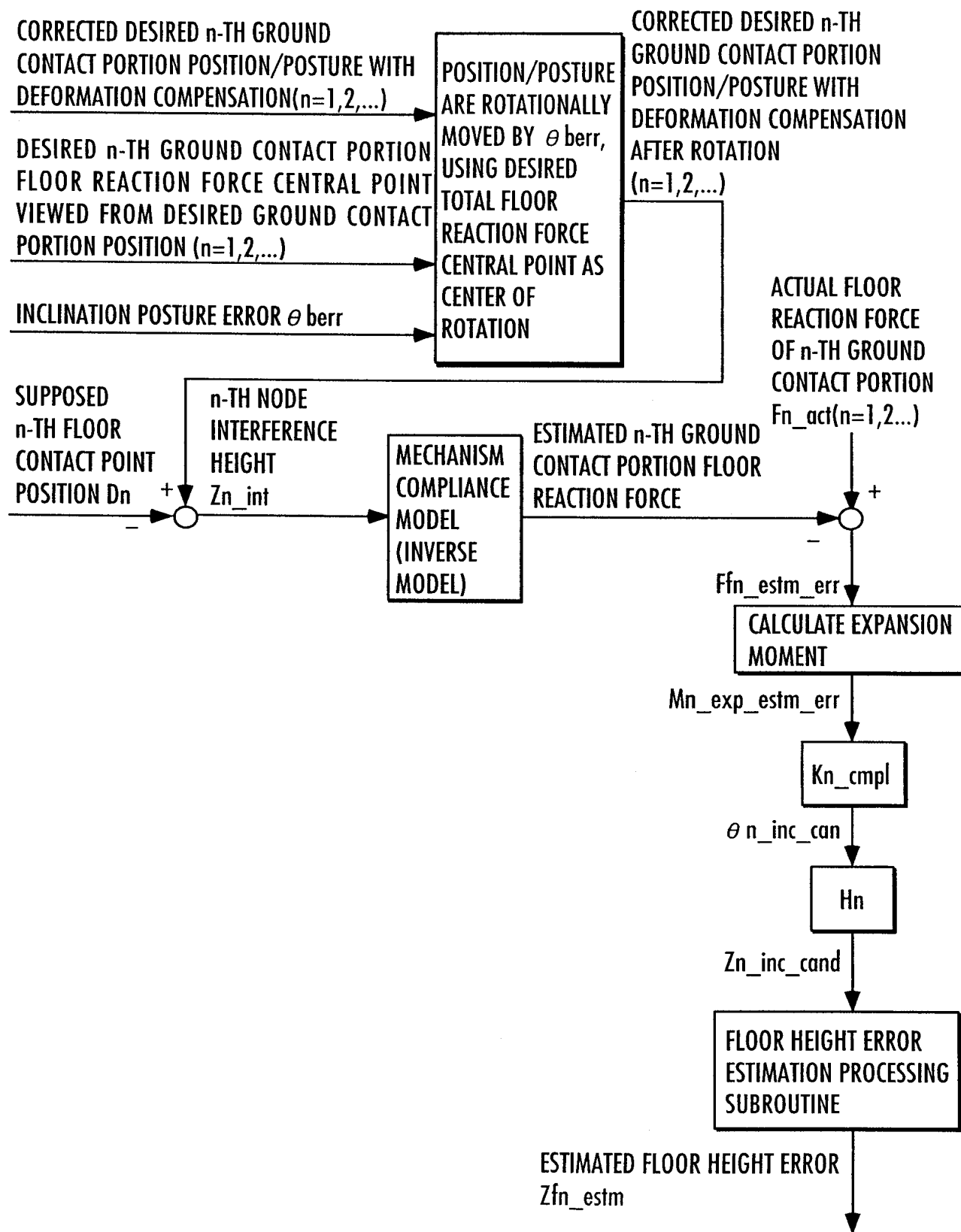
44 / 55

FIG.56



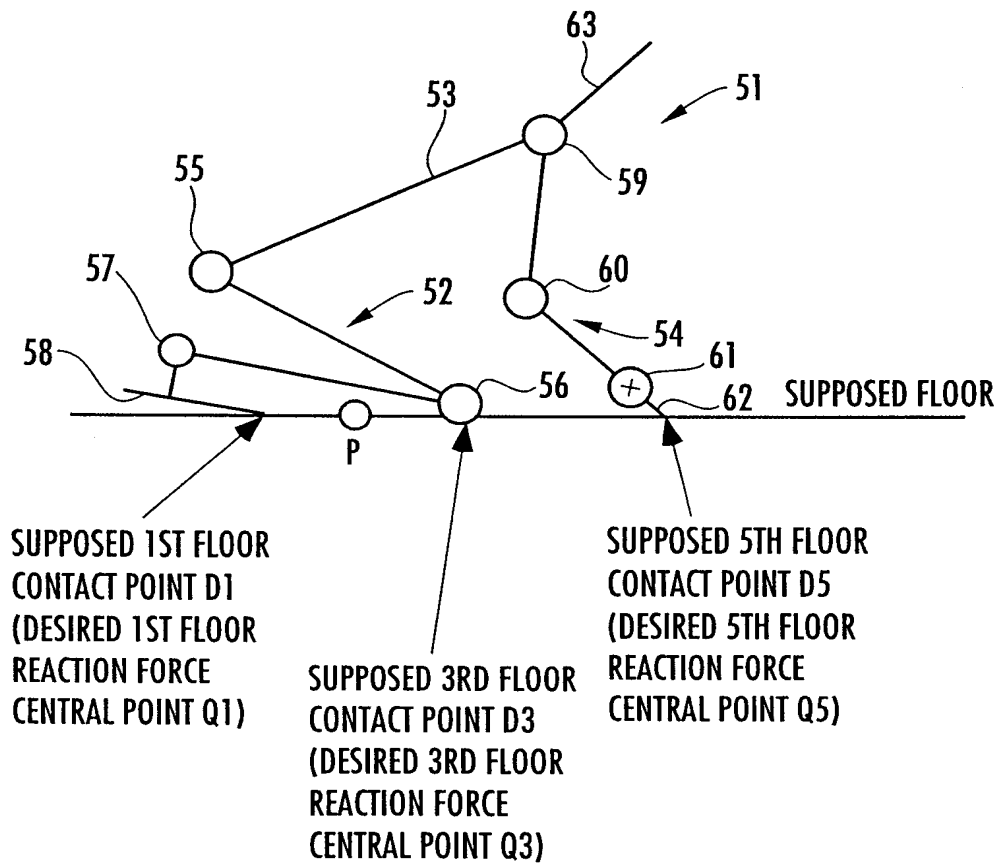
45 / 55

FIG.57



46 / 55

FIG.58



47 / 55

FIG.59

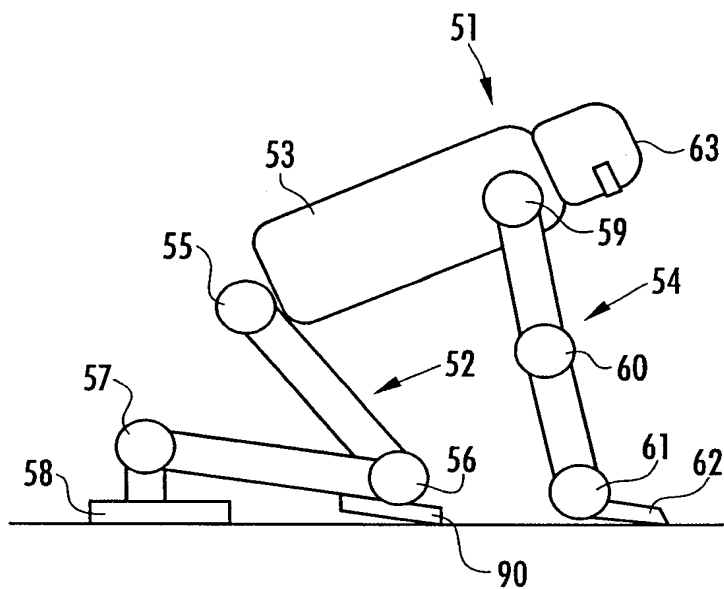


FIG.60

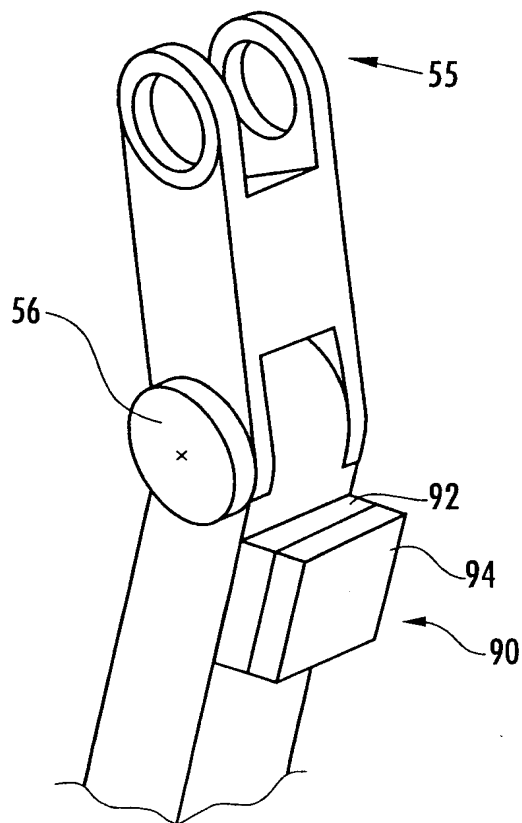
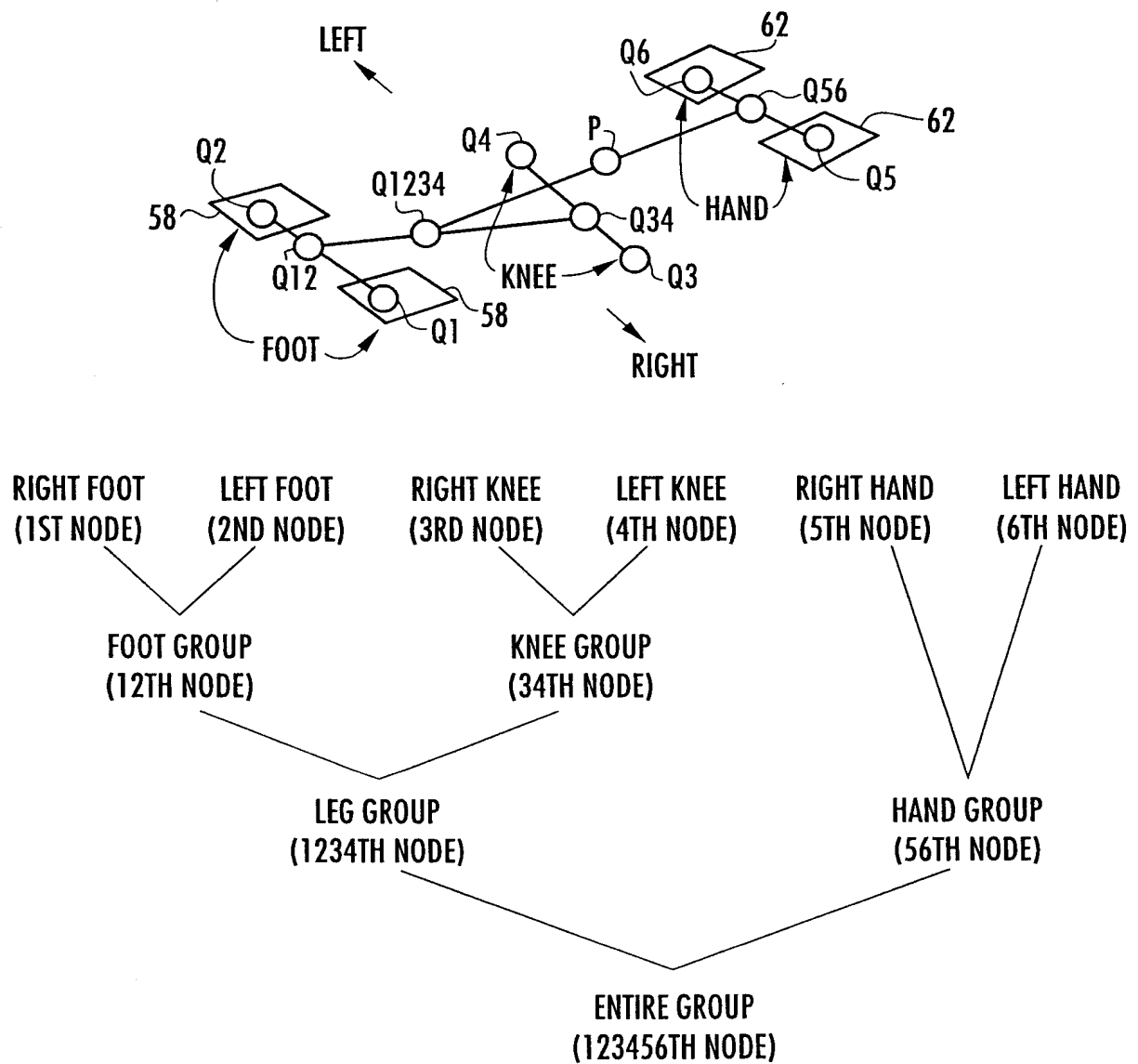
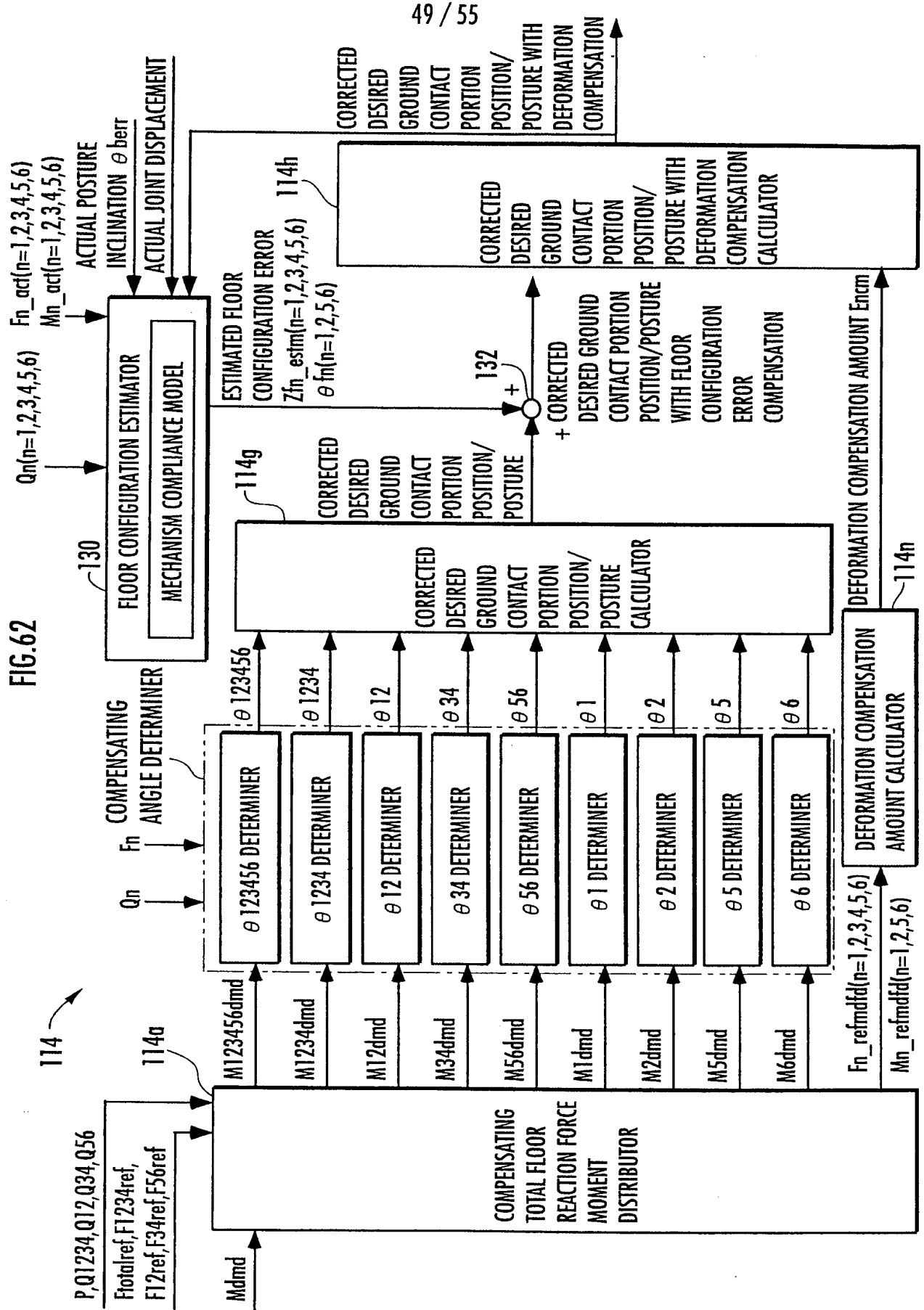


FIG.61





50 / 55

FIG.63(a)

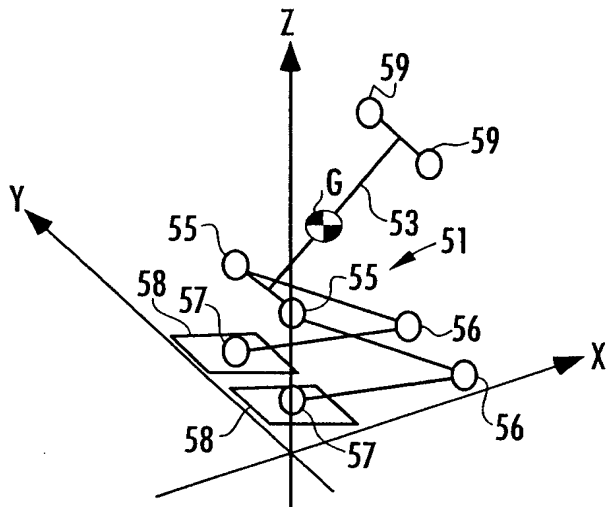


FIG.63(b)

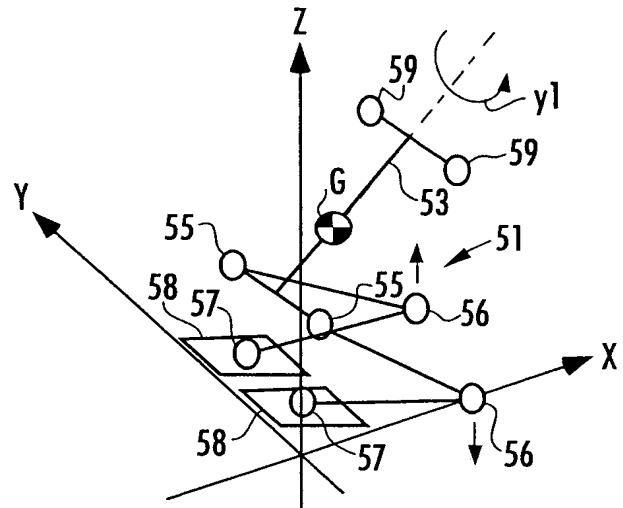
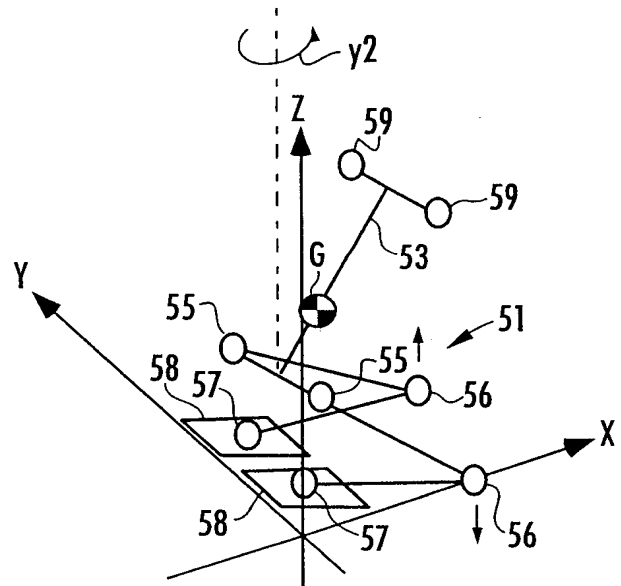
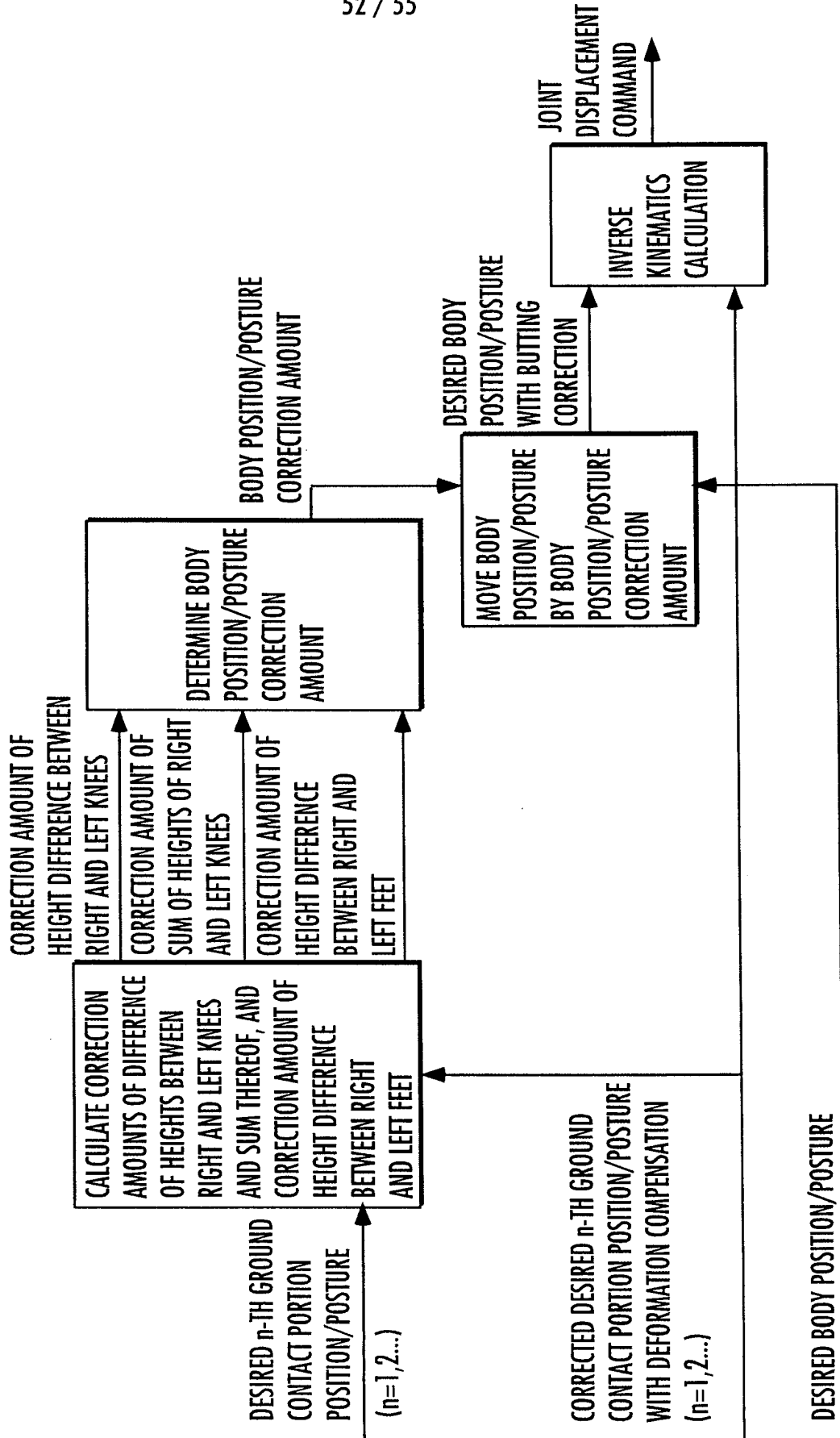


FIG.63(c)



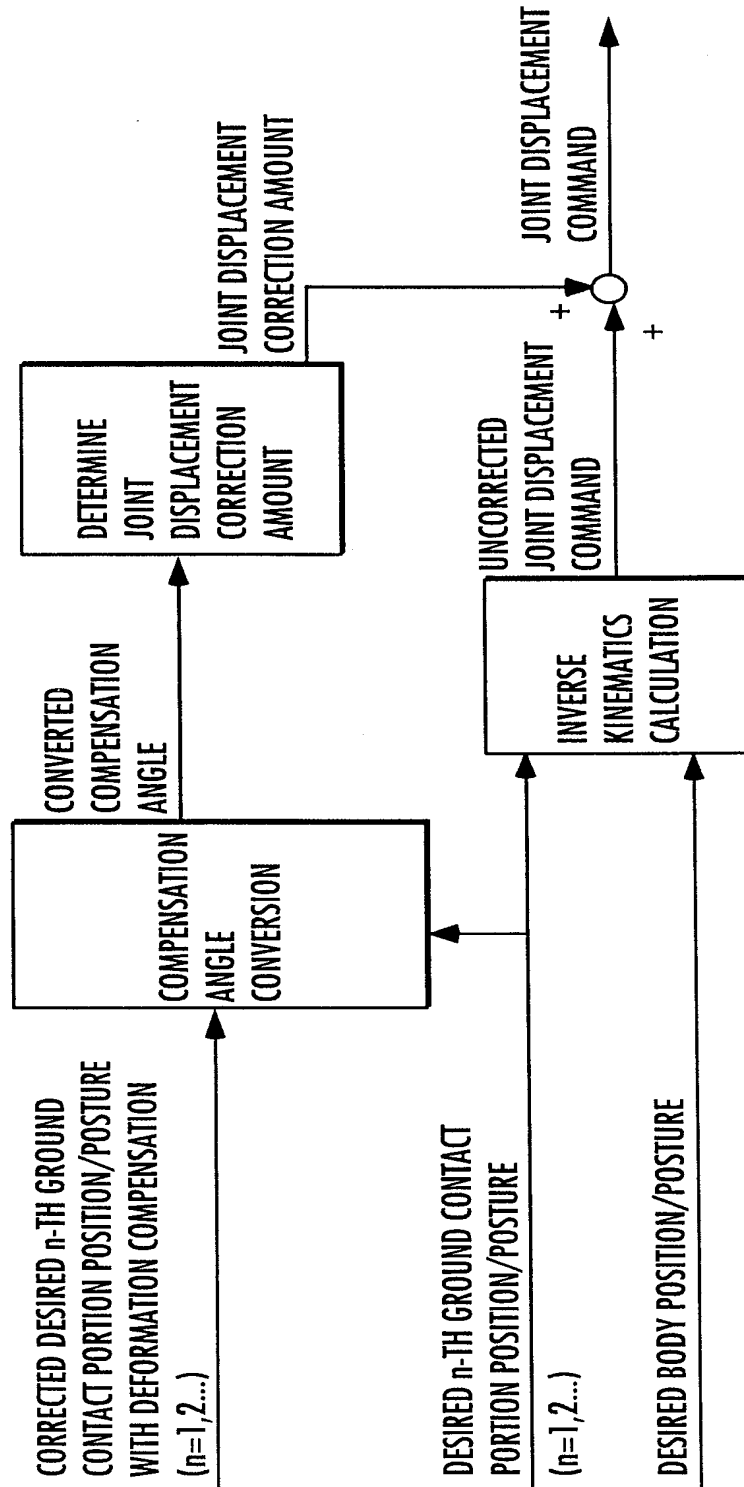
52 / 55

FIG. 65



53 / 55

FIG.66



54 / 55

FIG.67

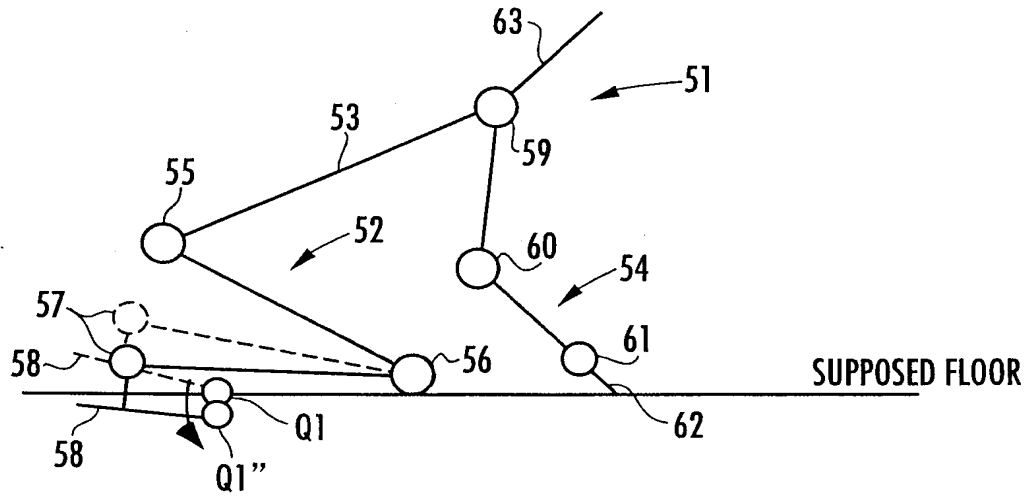
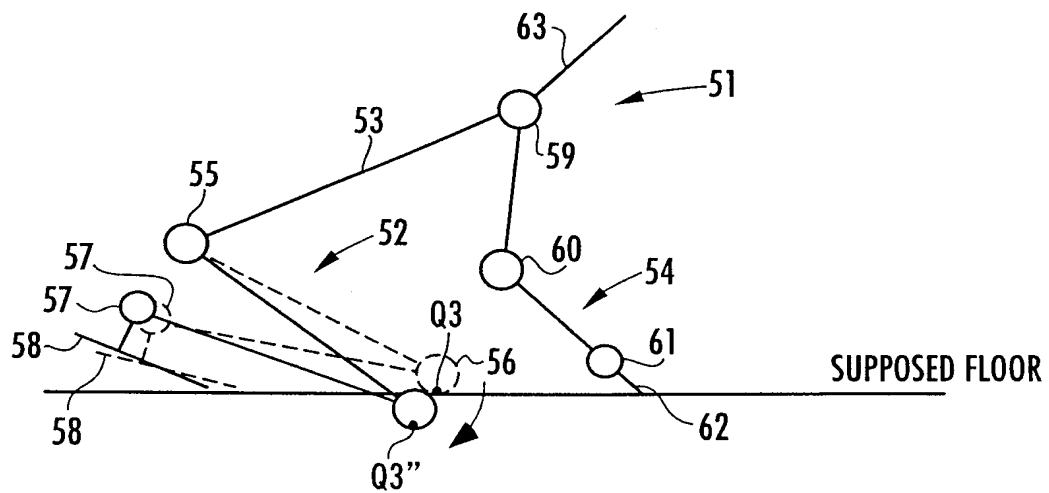


FIG.68



55 / 55

FIG.69

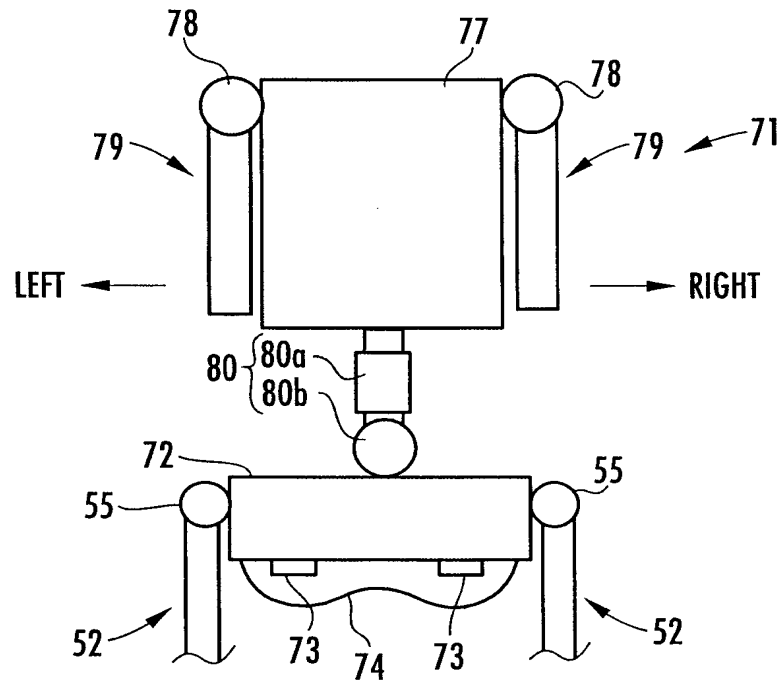


FIG.70

